

## **APPENDIX A**

### **Air Quality Nonattainment Area Results**



**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.39   | 0.47   |

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**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.09              | 0.09   | 0.12   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.08              | 0.08   | 0.11   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.09              | 0.09   | 0.12   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |

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|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.54   | 2.00              | 2.13   | 2.54   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.54   | 2.00              | 2.13   | 2.54   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.77   | 1.00              | 1.07   | 1.27   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.35              | 0.37   | 0.44   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.35              | 0.37   | 0.44   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.08              | 0.08   | 0.12   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.23   | 0.27   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

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| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.26   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.26   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.26   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.03              | 0.03   | 0.05   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.60   | 0.75              | 0.79   | 0.96   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.60   | 0.75              | 0.79   | 0.96   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.60   | 0.75              | 0.79   | 0.96   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |

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|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.02   | 0.03   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.11   | 0.11              | 0.11   | 0.15   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.11              | 0.11   | 0.15   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |

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|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.31              | 0.32   | 0.39   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.32              | 0.34   | 0.41   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.32              | 0.34   | 0.41   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.16   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.16   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.16   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.30   | 0.36   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.45   | 1.86              | 1.98   | 2.37   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.45   | 1.86              | 1.98   | 2.37   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.27   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.28   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.02              | 0.02   | 0.03   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.30   | 0.36   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.28              | 0.30   | 0.36   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.27   | 0.35              | 0.37   | 0.44   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.29   | 0.38              | 0.41   | 0.48   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.55   | 0.72              | 0.77   | 0.91   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.13   | 1.41              | 1.49   | 1.81   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.95   | 1.22              | 1.31   | 1.56   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.95   | 1.22              | 1.31   | 1.56   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.13   | 1.41              | 1.49   | 1.81   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.13   | 1.41              | 1.49   | 1.81   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.13   | 1.41              | 1.49   | 1.81   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.13   | 1.41              | 1.49   | 1.81   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.13   | 1.41              | 1.49   | 1.81   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.35              | 0.38   | 0.45   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.19   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.19   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.20   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.37              | 0.39   | 0.47   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.05   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.05   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.35   | 0.39              | 0.40   | 0.52   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.23   | 0.26              | 0.27   | 0.34   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.35   | 0.39              | 0.40   | 0.52   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.35   | 0.39              | 0.40   | 0.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.35   | 0.39              | 0.40   | 0.52   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.34              | 0.36   | 0.44   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.98   | 1.25              | 1.33   | 1.59   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.98   | 1.25              | 1.33   | 1.59   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.01   | 1.29              | 1.36   | 1.64   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.00   | 1.28              | 1.36   | 1.63   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.13   | 1.41              | 1.49   | 1.81   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.11   | 0.13   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.22   | 1.56              | 1.65   | 1.98   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.22   | 1.56              | 1.65   | 1.98   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.22   | 1.56              | 1.65   | 1.98   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.21   | 1.55              | 1.65   | 1.97   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.49   | 0.64              | 0.69   | 0.82   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.23              | 0.24   | 0.29   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.18   | 0.23              | 0.24   | 0.29   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.23              | 0.24   | 0.29   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.36              | 0.38   | 0.46   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vancouver Area: Clark County (part), WA                     | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.94   | 1.22              | 1.30   | 1.55   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |
| Winston-Salem Area, NC  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-1. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.41  | -0.54             | -0.52  | -0.65  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.79  | -2.31             | -2.14  | -2.61  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.69  | -2.23             | -2.15  | -2.68  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.82  | -1.09             | -1.05  | -1.30  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.29  | -0.39             | -0.38  | -0.47  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.11             | -0.10  | -0.12  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.73  | -0.97             | -0.93  | -1.16  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.91  | -1.21             | -1.16  | -1.45  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.91  | -1.21             | -1.16  | -1.45  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.18  | -0.23             | -0.22  | -0.28  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.23             | -0.22  | -0.27  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.14  | -0.18             | -0.18  | -0.22  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.12             | -0.11  | -0.14  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.34  | -0.44             | -0.43  | -0.53  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.71   | 3.83              | 6.18   | 9.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.08   | 0.11   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.26  | -0.35             | -0.34  | -0.42  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.11             | -0.11  | -0.14  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.76  | -0.99             | -0.94  | -1.15  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.82  | -1.08             | -1.04  | -1.30  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -8.91  | -11.81            | -11.38 | -14.17 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -8.13  | -10.77            | -10.38 | -12.93 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.92  | -11.81            | -11.39 | -14.18 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.35              | 0.68   | 1.05   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -3.96  | -5.24             | -5.05  | -6.29  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -3.90  | -5.16             | -4.98  | -6.20  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.96  | -5.24             | -5.05  | -6.29  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 32.45  | 52.43             | 65.49  | 90.20  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 32.45  | 52.43             | 65.49  | 90.20  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 16.09  | 26.05             | 32.61  | 44.94  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.10  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.40  | -0.53             | -0.51  | -0.64  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.03  | -0.05             | -0.04  | -0.05  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.79   | 9.33              | 11.62  | 15.99  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.91   | 9.48              | 11.76  | 16.16  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.61  | -2.11             | -2.00  | -2.47  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.61  | -2.11             | -2.00  | -2.48  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -1.61  | -2.11             | -2.00  | -2.48  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.41  | -0.54             | -0.52  | -0.65  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.77  | -0.97             | -0.84  | -1.00  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -7.01  | -9.23             | -8.81  | -10.92 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -1.02  | -1.35             | -1.30  | -1.62  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.60   | 5.77              | 7.16   | 9.85   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -1.35  | -1.79             | -1.72  | -2.15  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.08  | -0.11             | -0.10  | -0.13  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.90   | 4.80              | 6.15   | 8.53   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.90   | 4.80              | 6.15   | 8.53   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.90   | 4.80              | 6.15   | 8.53   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.29  | -0.38             | -0.37  | -0.46  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.48  | -0.64             | -0.62  | -0.77  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.48  | -0.64             | -0.62  | -0.77  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.48  | -0.64             | -0.62  | -0.77  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.67  | -2.21             | -2.13  | -2.66  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -3.45  | -4.57             | -4.41  | -5.49  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.34  | -4.43             | -4.27  | -5.31  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.63  | -0.79             | -0.69  | -0.82  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.45   | 6.38              | 11.12  | 16.72  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.45   | 6.38              | 11.12  | 16.72  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.28   | 6.16              | 10.90  | 16.45  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.07  | -4.06             | -3.90  | -4.85  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.10  | -4.10             | -3.94  | -4.90  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.97  | -3.92             | -3.77  | -4.69  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -2.01  | -2.64             | -2.51  | -3.11  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.40  | -0.54             | -0.52  | -0.64  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.35  | -0.46             | -0.44  | -0.55  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.25  | -1.65             | -1.59  | -1.98  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -3.91  | -5.18             | -4.99  | -6.22  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.91  | -5.17             | -4.99  | -6.21  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.60  | -4.76             | -4.59  | -5.72  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -3.56  | -4.72             | -4.55  | -5.66  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.09  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.67  | -0.87             | -0.82  | -1.01  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.77  | -3.67             | -3.54  | -4.40  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -2.77  | -3.67             | -3.54  | -4.40  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.50  | -3.31             | -3.19  | -3.97  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.96  | -1.27             | -1.22  | -1.52  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.24  | -1.64             | -1.58  | -1.97  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -9.77  | -12.90            | -12.38 | -15.39 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -9.97  | -13.17            | -12.64 | -15.71 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.67  | -2.21             | -2.13  | -2.65  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.45  | -1.92             | -1.85  | -2.30  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.27   | 2.97              | 4.91   | 7.30   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.34   | 1.77              | 3.80   | 5.94   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.34   | 1.77              | 3.80   | 5.94   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.23  | -1.37             | -0.91  | -0.90  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.54   | 0.98              | 1.36   | 1.93   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -5.77  | -7.38             | -6.70  | -8.10  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.63  | -7.20             | -6.52  | -7.88  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -5.63  | -7.20             | -6.52  | -7.88  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.04  | -0.06             | -0.05  | -0.07  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.14  | -0.19             | -0.18  | -0.23  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.72   | 7.59              | 9.42   | 12.95  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.72   | 1.18              | 1.47   | 2.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.91              | 1.34   | 1.94   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.01   | 1.63              | 2.03   | 2.80   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.33  | -0.43             | -0.42  | -0.52  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.30  | -0.39             | -0.38  | -0.47  |



**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.39  | -0.51             | -0.49  | -0.61  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -0.49  | -0.65             | -0.63  | -0.78  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.18              | 0.24   | 0.33   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.14              | 0.20   | 0.28   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.08  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.90  | -1.20             | -1.15  | -1.44  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.16  | -0.21             | -0.20  | -0.25  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.60  | -0.79             | -0.77  | -0.95  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.28  | -0.37             | -0.35  | -0.44  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -0.61  | -0.81             | -0.78  | -0.97  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.72  | -0.96             | -0.92  | -1.14  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.23  | -1.63             | -1.57  | -1.96  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.53   | 0.86              | 1.06   | 1.46   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -2.23  | -2.96             | -2.85  | -3.55  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -2.23  | -2.96             | -2.85  | -3.55  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.41  | -0.52             | -0.45  | -0.54  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.07  | -0.09  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.08  | -0.11             | -0.11  | -0.13  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.58  | -2.09             | -2.02  | -2.51  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.09  | -1.44             | -1.39  | -1.73  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.28  | -1.70             | -1.64  | -2.04  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.20  | -1.60             | -1.54  | -1.91  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.69  | -2.23             | -2.15  | -2.68  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.48  | -1.97             | -1.89  | -2.36  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.31  | -0.41             | -0.39  | -0.49  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 22.89  | 38.84             | 50.92  | 71.20  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.89  | 38.84             | 50.93  | 71.21  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.34   | 5.43              | 6.84   | 9.44   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.11   | 5.13              | 6.55   | 9.09   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.27  | -0.36             | -0.35  | -0.44  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.34  | -0.45             | -0.43  | -0.54  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.34  | -0.45             | -0.43  | -0.54  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.34  | -0.44             | -0.43  | -0.53  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 1.18              | 1.48   | 2.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.12  | -0.16             | -0.16  | -0.20  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.33  | -4.41             | -4.25  | -5.29  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -2.57  | -3.40             | -3.28  | -4.08  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.64  | -0.85             | -0.82  | -1.02  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.14  | -0.18             | -0.17  | -0.22  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.25  | -0.32             | -0.31  | -0.39  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.20  | -0.26             | -0.25  | -0.32  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.16  | -0.22             | -0.21  | -0.26  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.16  | -0.22             | -0.21  | -0.26  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.93  | -1.23             | -1.19  | -1.48  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.46  | -3.26             | -3.15  | -3.92  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.19  | -0.25             | -0.24  | -0.30  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.64   | 1.07              | 1.37   | 1.91   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.64   | 1.07              | 1.37   | 1.91   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.12             | -0.11  | -0.14  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.09  | -0.12             | -0.11  | -0.14  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.65  | -2.19             | -2.11  | -2.62  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.00  | -1.33             | -1.28  | -1.59  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.31  | -1.74             | -1.67  | -2.08  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.31  | -1.74             | -1.67  | -2.08  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.29  | -0.39             | -0.37  | -0.46  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.36  | -0.47             | -0.46  | -0.57  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.32   | 7.06              | 8.91   | 12.31  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.51   | 7.30              | 9.15   | 12.61  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.69  | -0.91             | -0.88  | -1.09  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.69  | -0.91             | -0.88  | -1.09  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.69  | -0.91             | -0.88  | -1.09  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.69  | -0.91             | -0.88  | -1.09  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.30  | -0.39             | -0.38  | -0.47  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.85  | -1.13             | -1.08  | -1.35  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -2.00  | -2.63             | -2.51  | -3.10  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -2.03  | -2.66             | -2.54  | -3.14  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 5.90   | 9.48              | 11.76  | 16.16  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.24   | 10.07             | 12.57  | 17.30  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.96  | 19.25             | 23.96  | 32.96  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.13             | -0.13  | -0.16  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.10  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.76   | 6.78              | 15.68  | 24.81  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 19.31  | 31.35             | 39.36  | 54.28  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 19.31  | 31.35             | 39.36  | 54.28  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 6.76              | 15.66  | 24.79  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.74   | 6.76              | 15.66  | 24.79  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.75   | 6.76              | 15.67  | 24.79  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.75   | 6.76              | 15.67  | 24.79  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.76   | 6.78              | 15.68  | 24.81  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.66  | -2.20             | -2.11  | -2.63  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.60  | -2.12             | -2.04  | -2.54  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.50   | 8.95              | 11.26  | 15.55  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.31  | -0.42             | -0.40  | -0.50  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.31  | -0.42             | -0.40  | -0.50  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.16   | 5.09              | 6.34   | 8.72   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.12  | -0.15             | -0.15  | -0.18  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.16  | -0.21             | -0.20  | -0.25  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -4.77  | -6.32             | -6.09  | -7.59  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.59  | -0.78             | -0.76  | -0.94  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.34   | 3.76              | 4.67   | 6.42   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.55  | -0.73             | -0.71  | -0.88  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.13  | -0.17             | -0.16  | -0.20  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.14   | 2.16              | 3.11   | 4.47   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.96   | 1.92              | 2.88   | 4.18   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.72   | 1.60              | 2.57   | 3.80   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -2.11  | -2.77             | -2.63  | -3.26  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.52  | -2.00             | -1.91  | -2.37  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.53   | 3.60              | 5.95   | 8.85   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.58   | 0.97              | 1.24   | 1.73   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 0.97              | 1.25   | 1.74   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.25  | -0.33             | -0.32  | -0.40  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.16             | -0.16  | -0.20  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.05             | -0.04  | -0.06  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.08  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.03  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.22  | -0.30             | -0.28  | -0.35  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.25  | -0.33             | -0.31  | -0.39  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.10  | -0.13             | -0.13  | -0.16  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.44  | -3.23             | -3.12  | -3.88  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.19  | -0.26             | -0.25  | -0.31  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.19  | -0.26             | -0.25  | -0.31  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.14  | -1.50             | -1.45  | -1.80  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.74  | -0.98             | -0.94  | -1.17  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -17.83 | -22.78            | -20.61 | -24.88 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -9.18  | -11.49            | -10.00 | -11.83 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -17.92 | -22.88            | -20.71 | -25.01 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -17.85 | -22.80            | -20.63 | -24.91 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -17.83 | -22.78            | -20.61 | -24.88 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.10  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -2.12  | -2.81             | -2.71  | -3.37  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.07  | -0.10             | -0.09  | -0.11  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.07  | -0.10             | -0.09  | -0.11  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.26  | -0.34             | -0.33  | -0.41  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.13  | -0.17             | -0.17  | -0.21  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.46   | 0.78              | 1.01   | 1.41   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.38   | 7.38              | 9.60   | 13.40  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 14.66  | 25.11             | 33.20  | 46.55  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.66  | 25.11             | 33.20  | 46.55  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.22  | 20.55             | 28.81  | 41.07  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 11.83  | 21.35             | 29.58  | 42.04  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -4.57  | -6.06             | -5.84  | -7.27  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.79  | -6.35             | -6.12  | -7.62  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.79  | -6.35             | -6.12  | -7.62  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.11   | 0.15   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.11             | -0.10  | -0.13  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.53  | -0.70             | -0.67  | -0.83  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.24  | -0.31             | -0.30  | -0.37  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -2.23  | -2.85             | -2.60  | -3.15  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.23  | -2.85             | -2.60  | -3.15  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.99  | -2.54             | -2.30  | -2.78  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.99  | -2.54             | -2.30  | -2.78  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.51  | -2.00             | -1.93  | -2.40  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.95  | -1.26             | -1.21  | -1.50  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.28  | -1.70             | -1.64  | -2.04  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.25  | -1.65             | -1.59  | -1.98  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.52  | -0.69             | -0.66  | -0.82  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.81  | -2.39             | -2.31  | -2.87  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.05  | -4.04             | -3.89  | -4.85  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.57  | -0.76             | -0.73  | -0.91  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.57  | -0.76             | -0.73  | -0.91  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.57  | -0.76             | -0.73  | -0.91  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.43  | -0.57             | -0.55  | -0.68  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -1.19  | -1.39             | -1.05  | -1.14  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.59  | -0.79             | -0.76  | -0.94  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.59  | -0.79             | -0.76  | -0.94  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.69  | -0.92             | -0.88  | -1.10  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.85   | 6.89              | 15.79  | 24.95  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.67  | -2.22             | -2.14  | -2.66  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.40  | -0.53             | -0.51  | -0.64  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.12              | 0.17   | 0.24   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.76  | -2.33             | -2.25  | -2.80  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.61  | -2.14             | -2.06  | -2.57  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -1.44  | -1.44             | -0.65  | -0.39  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -1.44  | -1.44             | -0.65  | -0.39  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.39  | -1.37             | -0.59  | -0.31  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.32  | -0.43             | -0.41  | -0.51  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.93   | 1.56              | 2.01   | 2.79   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.67  | -0.49             | 0.15   | 0.54   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | 0.21              | 0.71   | 1.18   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.08  | 0.21              | 0.71   | 1.18   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -0.80  | -1.06             | -1.02  | -1.27  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.37  | -5.79             | -5.58  | -6.95  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.38  | -5.80             | -5.59  | -6.97  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -4.37  | -5.80             | -5.59  | -6.95  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 16.36  | 28.67             | 38.71  | 54.60  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 16.40  | 28.72             | 38.76  | 54.67  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.36  | 28.67             | 38.71  | 54.60  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 17.09  | 29.64             | 39.64  | 55.76  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -4.92  | -6.29             | -5.70  | -6.89  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -4.92  | -6.29             | -5.70  | -6.89  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -4.92  | -6.29             | -5.70  | -6.89  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.91  | -6.28             | -5.70  | -6.88  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.91  | -6.28             | -5.70  | -6.88  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.21              | 0.26   | 0.36   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.10  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.20  | -1.58             | -1.53  | -1.90  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.33  | -0.44             | -0.42  | -0.53  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -3.54  | -4.67             | -4.48  | -5.56  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.53  | -0.68             | -0.63  | -0.78  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.16  | -0.22             | -0.21  | -0.26  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.16  | -0.22             | -0.21  | -0.26  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.65  | -0.86             | -0.83  | -1.03  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -0.38  | -0.50             | -0.48  | -0.60  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.39  | -0.52             | -0.50  | -0.62  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.38  | -1.83             | -1.77  | -2.20  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.21  | -0.28             | -0.27  | -0.34  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.86  | 17.45             | 21.66  | 29.77  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.15  | -1.52             | -1.47  | -1.83  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.53  | 0.20              | 1.63   | 2.86   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.50  | 0.24              | 1.66   | 2.90   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.50  | 0.24              | 1.66   | 2.90   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.28  | -0.37             | -0.36  | -0.44  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.08  | -0.11             | -0.11  | -0.13  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.14  | -0.17             | -0.16  | -0.19  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.14  | -0.17             | -0.16  | -0.19  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.14  | -0.17             | -0.16  | -0.19  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.46  | -0.61             | -0.58  | -0.72  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.71  | -0.93             | -0.90  | -1.12  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.08              | 0.17   | 0.26   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.22              | 0.29   | 0.42   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.99   | 8.27              | 10.61  | 14.74  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.10  | -1.46             | -1.41  | -1.75  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.03  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.52  | -0.69             | -0.66  | -0.82  |
| Vancouver Area: Clark County (part), WA                     | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.35  | -0.47             | -0.45  | -0.56  |



**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 19.60  | 31.73             | 39.72  | 54.74  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.96  | -1.27             | -1.22  | -1.52  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.08              | 0.17   | 0.26   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.10             | -0.09  | -0.12  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.44   | 2.32              | 2.88   | 3.96   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.43   | 2.30              | 2.87   | 3.95   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.43   | 2.30              | 2.86   | 3.94   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.86  | -1.14             | -1.10  | -1.36  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -6.33  | -8.38             | -8.08  | -10.06 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -6.32  | -8.37             | -8.06  | -10.04 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.22  | -8.24             | -7.94  | -9.89  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.43  | -0.57             | -0.55  | -0.68  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.16             | -0.16  | -0.19  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.83   | 1.36              | 1.72   | 2.38   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.11  | -0.14             | -0.14  | -0.17  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.05   | 3.37              | 4.30   | 5.96   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.05   | 3.37              | 4.30   | 5.96   |
| Winston-Salem Area, NC  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.48  | -0.64             | -0.62  | -0.77  |

**Table A-2. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.29  | -0.39             | -0.37  | -0.46  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.62  | -0.83             | -0.80  | -0.99  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -0.48  | -0.64             | -0.61  | -0.76  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.20  | -1.59             | -1.53  | -1.90  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.25  | -0.33             | -0.32  | -0.39  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.21  | -0.28             | -0.27  | -0.34  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.33  | -1.46             | -1.45  | -1.66  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.88  | -6.02             | -5.90  | -6.59  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.44  | -5.98             | -5.92  | -6.77  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -2.65  | -2.91             | -2.88  | -3.29  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.95  | -1.04             | -1.03  | -1.18  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.30  | -0.30             | -0.29  | -0.32  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.04              | 0.04   | 0.06   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.21  | -0.20             | -0.20  | -0.21  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.36  | -2.60             | -2.57  | -2.94  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -2.94  | -3.23             | -3.20  | -3.66  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.94  | -3.23             | -3.20  | -3.66  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.57  | -0.62             | -0.62  | -0.70  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.56  | -0.61             | -0.60  | -0.69  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.44  | -0.48             | -0.48  | -0.54  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.28  | -0.31             | -0.31  | -0.35  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.08  | -1.19             | -1.18  | -1.35  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.49   | 14.88             | 16.37  | 23.34  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.20              | 0.21   | 0.28   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.85  | -0.94             | -0.93  | -1.06  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.27  | -0.30             | -0.30  | -0.34  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.48  | -2.62             | -2.58  | -2.91  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.64  | -2.90             | -2.87  | -3.29  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -28.74 | -31.60            | -31.28 | -35.80 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -26.22 | -28.83            | -28.54 | -32.66 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -28.77 | -31.62            | -31.30 | -35.82 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.29  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.09  | 1.57              | 1.78   | 2.67   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.05  | -0.06             | -0.05  | -0.06  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -12.77 | -14.04            | -13.90 | -15.90 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -12.58 | -13.83            | -13.69 | -15.67 |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -12.77 | -14.04            | -13.90 | -15.90 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 86.45  | 168.22            | 176.39 | 229.59 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 86.45  | 168.22            | 176.39 | 229.59 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 42.76  | 83.71             | 87.82  | 114.41 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.20  | -0.22             | -0.21  | -0.24  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.29  | -1.42             | -1.41  | -1.61  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.50  | 29.88             | 31.31  | 40.70  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 15.85  | 30.27             | 31.70  | 41.14  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.22  | -5.58             | -5.51  | -6.24  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.23  | -5.59             | -5.51  | -6.25  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -5.23  | -5.59             | -5.51  | -6.25  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.33  | -1.46             | -1.45  | -1.66  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -2.62  | -2.45             | -2.37  | -2.54  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -22.74 | -24.56            | -24.25 | -27.59 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -3.29  | -3.62             | -3.58  | -4.10  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.65   | 18.44             | 19.31  | 25.06  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -4.35  | -4.78             | -4.74  | -5.42  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.32  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.15  | -0.17             | -0.17  | -0.19  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.52   | 15.69             | 16.53  | 21.73  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.52   | 15.69             | 16.53  | 21.73  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.52   | 15.69             | 16.53  | 21.73  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.24  | -0.27             | -0.26  | -0.30  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.93  | -1.02             | -1.01  | -1.15  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.56  | -1.71             | -1.70  | -1.94  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.56  | -1.71             | -1.70  | -1.94  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.56  | -1.71             | -1.70  | -1.94  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.39  | -5.92             | -5.86  | -6.71  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -11.16 | -12.27            | -12.14 | -13.90 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -10.82 | -11.90            | -11.77 | -13.48 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.12  | -1.99             | -1.92  | -2.06  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.83   | 26.32             | 29.33  | 42.78  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.83   | 26.32             | 29.33  | 42.78  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.29   | 25.72             | 28.74  | 42.10  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.84  | -0.92             | -0.91  | -1.04  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.39  | -0.43             | -0.42  | -0.48  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.84  | -0.92             | -0.91  | -1.04  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.83  | -0.91             | -0.90  | -1.03  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -9.92  | -10.84            | -10.73 | -12.25 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.02 | -10.96            | -10.84 | -12.39 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -9.58  | -10.48            | -10.36 | -11.84 |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -6.53  | -7.02             | -6.93  | -7.87  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.30  | -1.43             | -1.42  | -1.62  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.12  | -1.23             | -1.21  | -1.39  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.02  | -4.42             | -4.38  | -5.01  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -12.61 | -13.87            | -13.73 | -15.71 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -12.60 | -13.85            | -13.71 | -15.69 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -11.60 | -12.75            | -12.62 | -14.45 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -11.49 | -12.63            | -12.50 | -14.31 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.22  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.18  | -2.30             | -2.26  | -2.55  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -8.93  | -9.82             | -9.72  | -11.13 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -8.93  | -9.82             | -9.72  | -11.13 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -8.06  | -8.86             | -8.77  | -10.04 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.30  | -0.33             | -0.32  | -0.37  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.34  | -0.37             | -0.37  | -0.42  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.03  | -3.33             | -3.30  | -3.77  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -4.00  | -4.40             | -4.36  | -4.99  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -31.57 | -34.44            | -34.05 | -38.87 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -32.22 | -35.16            | -34.76 | -39.68 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.38  | -5.92             | -5.86  | -6.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.66  | -5.13             | -5.07  | -5.81  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.60   | 11.77             | 13.00  | 18.67  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.45  | 8.63              | 9.92   | 15.23  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.45  | 8.63              | 9.92   | 15.23  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.01  | -2.39             | -2.10  | -1.64  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.10   | 3.23              | 3.47   | 4.73   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -19.11 | -18.98            | -18.51 | -20.42 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -18.66 | -18.49            | -18.03 | -19.87 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -18.66 | -18.49            | -18.03 | -19.87 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.14  | -0.16             | -0.16  | -0.18  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.20  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.05  | -0.06             | -0.06  | -0.06  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.50  | -0.55             | -0.55  | -0.63  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.66  | 24.24             | 25.38  | 32.96  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.94   | 3.80              | 3.99   | 5.20   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.99   | 3.35              | 3.63   | 5.01   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.70   | 5.23              | 5.48   | 7.13   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.05  | -1.15             | -1.14  | -1.31  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.98  | -1.08             | -1.07  | -1.22  |



**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.24  | -1.37             | -1.35  | -1.55  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -1.59  | -1.75             | -1.74  | -1.99  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.30   | 0.61              | 0.64   | 0.85   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.19   | 0.50              | 0.53   | 0.72   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.20  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.92  | -3.21             | -3.17  | -3.63  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.50  | -0.55             | -0.55  | -0.63  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.93  | -2.13             | -2.11  | -2.41  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.89  | -0.98             | -0.97  | -1.11  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -1.97  | -2.17             | -2.15  | -2.46  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.19             | -0.18  | -0.21  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -2.32  | -2.53             | -2.50  | -2.85  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.97  | -4.37             | -4.32  | -4.95  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.24  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.43   | 2.73              | 2.86   | 3.71   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -7.19  | -7.91             | -7.83  | -8.96  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -7.19  | -7.90             | -7.82  | -8.95  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.37  | -1.30             | -1.26  | -1.36  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.27  | -0.30             | -0.30  | -0.34  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.10  | -5.61             | -5.55  | -6.35  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.52  | -3.87             | -3.83  | -4.38  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.07              | 0.07   | 0.10   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.06              | 0.07   | 0.10   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.49  | -0.54             | -0.53  | -0.61  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -4.14  | -4.55             | -4.51  | -5.16  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.89  | -4.27             | -4.23  | -4.84  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.44  | -5.98             | -5.92  | -6.77  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.79  | -5.27             | -5.22  | -5.97  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.00  | -1.09             | -1.08  | -1.24  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 57.41  | 129.09            | 136.70 | 181.44 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 57.42  | 129.11            | 136.71 | 181.45 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.28  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 8.81   | 17.53             | 18.41  | 24.04  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 8.09   | 16.74             | 17.62  | 23.14  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.16  | -0.18             | -0.17  | -0.20  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.89  | -0.98             | -0.97  | -1.11  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.09  | -1.20             | -1.19  | -1.36  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.09  | -1.20             | -1.19  | -1.36  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.08  | -1.19             | -1.18  | -1.35  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.95   | 3.81              | 4.00   | 5.21   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.40  | -0.44             | -0.43  | -0.49  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -10.74 | -11.81            | -11.69 | -13.38 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -8.29  | -9.11             | -9.02  | -10.32 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -2.02  | -2.22             | -2.20  | -2.52  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.44  | -0.48             | -0.48  | -0.55  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.29  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.81  | -0.89             | -0.88  | -1.01  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.83  | -0.91             | -0.91  | -1.04  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.83  | -0.91             | -0.91  | -1.04  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.28  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.64  | -0.70             | -0.70  | -0.80  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.32  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.49  | -0.53             | -0.53  | -0.60  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.53  | -0.58             | -0.57  | -0.66  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.53  | -0.58             | -0.57  | -0.66  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.24  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.00  | -3.30             | -3.27  | -3.74  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.95  | -8.74             | -8.65  | -9.90  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.61  | -0.67             | -0.67  | -0.76  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.72   | 3.55              | 3.74   | 4.92   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.72   | 3.55              | 3.74   | 4.92   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.32  | -0.35             | -0.35  | -0.40  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.32  | -0.35             | -0.34  | -0.39  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.34  | -0.38             | -0.37  | -0.43  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.32  | -5.85             | -5.79  | -6.63  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.23  | -3.55             | -3.52  | -4.03  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.23  | -4.65             | -4.60  | -5.26  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.23  | -4.65             | -4.60  | -5.26  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.94  | -1.03             | -1.02  | -1.17  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.30  | -0.33             | -0.33  | -0.37  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.16  | -1.27             | -1.26  | -1.44  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.43  | 22.88             | 24.04  | 31.42  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.16  | -0.18             | -0.17  | -0.20  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.04  | 23.55             | 24.70  | 32.18  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance,                                 | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -2.21  | -2.43             | -2.41  | -2.76  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.21  | -2.43             | -2.41  | -2.76  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.21  | -2.43             | -2.41  | -2.76  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.21  | -2.43             | -2.41  | -2.76  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.98  | -1.08             | -1.07  | -1.22  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.74  | -3.01             | -2.98  | -3.41  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -6.51  | -7.00             | -6.91  | -7.85  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -6.58  | -7.08             | -6.99  | -7.94  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.17             | -0.17  | -0.19  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 15.85  | 30.26             | 31.69  | 41.13  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 16.64  | 32.28             | 33.84  | 44.03  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.04              | 0.04   | 0.06   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.04              | 0.04   | 0.06   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.99  | 61.61             | 64.56  | 83.90  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.39  | -0.43             | -0.43  | -0.49  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.32  | -0.36             | -0.35  | -0.40  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.83  | 35.02             | 40.71  | 63.53  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 51.26  | 101.04            | 106.05 | 138.30 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 51.26  | 101.04            | 106.05 | 138.30 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -8.89  | 34.96             | 40.65  | 63.46  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | -8.88  | 34.97             | 40.66  | 63.47  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -8.87  | 34.98             | 40.67  | 63.48  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -8.88  | 34.97             | 40.66  | 63.47  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.83  | 35.02             | 40.71  | 63.53  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.35  | -5.87             | -5.81  | -6.65  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.16  | -5.66             | -5.61  | -6.41  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.44  | -0.49             | -0.48  | -0.55  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.56  | 28.90             | 30.35  | 39.62  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.01  | -1.12             | -1.10  | -1.26  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.01  | -1.12             | -1.10  | -1.26  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.46   | 16.31             | 17.09  | 22.21  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.36  | -0.40             | -0.39  | -0.45  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.51  | -0.56             | -0.56  | -0.64  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -15.39 | -16.92            | -16.75 | -19.17 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.89  | -2.08             | -2.06  | -2.35  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.49  | -0.54             | -0.54  | -0.61  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.24  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.26   | 12.00             | 12.57  | 16.33  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.79  | -1.97             | -1.95  | -2.23  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.15  | -0.17             | -0.17  | -0.19  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.42  | -0.46             | -0.46  | -0.53  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.44   | 7.71              | 8.31   | 11.41  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.85   | 7.06              | 7.67   | 10.68  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.06   | 6.20              | 6.81   | 9.70   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -6.84  | -7.34             | -7.24  | -8.23  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.94  | -5.33             | -5.26  | -5.98  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.91   | 14.24             | 15.74  | 22.61  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.50   | 3.17              | 3.34   | 4.40   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.51   | 3.19              | 3.36   | 4.43   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.78  | -0.85             | -0.84  | -0.95  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.42  | -0.46             | -0.45  | -0.52  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.11  | -0.13             | -0.12  | -0.14  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.13  | -0.10             | -0.09  | -0.09  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.72  | -0.79             | -0.78  | -0.90  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.79  | -0.87             | -0.86  | -0.98  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.33  | -0.36             | -0.36  | -0.41  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.87  | -8.65             | -8.57  | -9.80  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.61  | -0.67             | -0.66  | -0.76  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.61  | -0.67             | -0.66  | -0.75  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.66  | -4.02             | -3.98  | -4.56  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.09              | 0.10   | 0.13   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.38  | -2.61             | -2.59  | -2.96  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -59.17 | -58.48            | -56.99 | -62.74 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -30.96 | -28.80            | -27.80 | -29.84 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -59.43 | -58.77            | -57.28 | -63.07 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -59.25 | -58.57            | -57.08 | -62.84 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -59.17 | -58.48            | -56.99 | -62.74 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.23  | -0.26             | -0.25  | -0.29  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.25  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -6.85  | -7.54             | -7.46  | -8.54  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.29  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.29  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.43  | -0.47             | -0.47  | -0.54  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.84  | -0.92             | -0.91  | -1.04  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.42  | -0.46             | -0.45  | -0.52  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.21  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.36  | -0.39             | -0.39  | -0.44  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.12   | 2.53              | 2.68   | 3.55   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.10  | 24.39             | 25.79  | 34.13  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 36.35  | 83.99             | 89.08  | 118.62 |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 36.35  | 83.99             | 89.08  | 118.62 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 25.21  | 71.74             | 76.96  | 104.75 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 27.16  | 73.88             | 79.08  | 107.18 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -14.72 | -16.18            | -16.02 | -18.33 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -15.45 | -16.99            | -16.81 | -19.24 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -15.44 | -16.98            | -16.80 | -19.23 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.27              | 0.29   | 0.37   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.27  | -0.30             | -0.30  | -0.34  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.73  | -1.90             | -1.89  | -2.16  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.74  | -0.78             | -0.77  | -0.87  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -7.36  | -7.35             | -7.18  | -7.93  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.36  | -7.35             | -7.18  | -7.93  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.61  | -6.53             | -6.36  | -7.00  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.61  | -6.53             | -6.36  | -7.00  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.90  | -5.38             | -5.32  | -6.09  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -3.07  | -3.35             | -3.32  | -3.79  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -4.13  | -4.54             | -4.50  | -5.15  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.39  | -0.43             | -0.43  | -0.49  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -4.02  | -4.42             | -4.37  | -5.00  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.30  | -0.33             | -0.32  | -0.37  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.67  | -1.84             | -1.82  | -2.08  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.10             | -0.09  | -0.11  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -5.82  | -6.40             | -6.34  | -7.25  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -9.85  | -10.82            | -10.71 | -12.26 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.84  | -2.02             | -2.00  | -2.29  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.84  | -2.02             | -2.00  | -2.29  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -1.84  | -2.02             | -2.00  | -2.29  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.36  | -1.50             | -1.48  | -1.70  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.21  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -4.18  | -3.18             | -2.95  | -2.84  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -1.86  | -2.04             | -2.02  | -2.31  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -1.86  | -2.04             | -2.02  | -2.31  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.17  | -2.39             | -2.36  | -2.70  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | -8.56  | 35.32             | 41.00  | 63.87  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.40  | -5.94             | -5.87  | -6.72  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.29  | -1.42             | -1.40  | -1.61  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.43  | -0.47             | -0.47  | -0.53  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.42              | 0.45   | 0.60   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -5.56  | -6.11             | -6.05  | -6.92  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.21  | -5.73             | -5.67  | -6.49  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -5.55  | -2.50             | -1.99  | -0.92  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -5.55  | -2.51             | -1.99  | -0.92  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.40  | -2.34             | -1.83  | -0.74  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.06  | -1.17             | -1.15  | -1.32  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.42   | 5.14              | 5.43   | 7.15   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.92  | -0.17             | 0.24   | 1.43   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.88  | 1.51              | 1.83   | 3.03   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.88  | 1.51              | 1.83   | 3.03   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -2.42  | -2.66             | -2.63  | -3.01  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -14.10 | -15.50            | -15.35 | -17.56 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.13 | -15.54            | -15.38 | -17.60 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -14.12 | -15.52            | -15.36 | -17.58 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.27  | 97.35             | 103.68 | 139.18 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.41  | 97.50             | 103.83 | 139.35 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 39.27  | 97.35             | 103.68 | 139.18 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 41.65  | 99.96             | 106.27 | 142.14 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -16.37 | -16.23            | -15.83 | -17.45 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -16.37 | -16.23            | -15.83 | -17.45 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -16.37 | -16.23            | -15.83 | -17.45 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -16.36 | -16.23            | -15.83 | -17.45 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -16.36 | -16.23            | -15.83 | -17.45 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.35   | 0.67              | 0.71   | 0.92   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.25  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.86  | -4.24             | -4.20  | -4.80  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.07  | -1.18             | -1.17  | -1.33  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -11.43 | -12.45            | -12.30 | -14.03 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.71  | -1.76             | -1.73  | -1.93  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.53  | -0.58             | -0.58  | -0.66  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.53  | -0.58             | -0.58  | -0.66  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.22  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -2.09  | -2.30             | -2.27  | -2.60  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.21  | -1.33             | -1.32  | -1.51  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.25  | -1.37             | -1.36  | -1.55  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -4.46  | -4.91             | -4.86  | -5.56  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.70  | -0.77             | -0.76  | -0.87  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 29.15  | 55.72             | 58.36  | 75.76  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -3.65  | -4.01             | -3.97  | -4.55  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -3.47  | 3.21              | 4.12   | 7.38   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -3.37  | 3.31              | 4.23   | 7.49   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -3.37  | 3.31              | 4.23   | 7.49   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.90  | -0.99             | -0.98  | -1.12  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.45  | -0.45             | -0.43  | -0.48  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.45  | -0.45             | -0.43  | -0.48  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.45  | -0.45             | -0.43  | -0.48  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.47  | -1.58             | -1.56  | -1.77  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.05             | -0.05  | -0.05  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.28  | -2.50             | -2.47  | -2.83  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.12  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance,                                 | 100                                       | 0  | -0.04  | 0.38              | 0.43   | 0.66   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.32   | 0.78              | 0.83   | 1.11   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.42  | -0.46             | -0.46  | -0.52  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.30  | -0.33             | -0.33  | -0.38  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.88  | 27.06             | 28.53  | 37.53  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.37  | -0.40             | -0.40  | -0.46  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.56  | -3.92             | -3.88  | -4.44  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.10  | -0.08             | -0.08  | -0.08  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.67  | -1.84             | -1.82  | -2.08  |



**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.13  | -1.25             | -1.23  | -1.41  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 52.10  | 101.97            | 106.97 | 139.35 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -3.09  | -3.39             | -3.35  | -3.83  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.15  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | 0.38              | 0.43   | 0.66   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.23  | -0.26             | -0.25  | -0.29  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.88   | 7.42              | 7.77   | 10.08  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.83   | 7.38              | 7.73   | 10.04  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.82   | 7.36              | 7.72   | 10.03  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.77  | -3.04             | -3.01  | -3.45  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -20.42 | -22.44            | -22.21 | -25.42 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -20.38 | -22.40            | -22.17 | -25.37 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -20.06 | -22.05            | -21.83 | -24.98 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.35  | -1.49             | -1.47  | -1.68  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.44             | -0.44  | -0.50  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.13   | 4.36              | 4.59   | 6.01   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.36  | -0.40             | -0.39  | -0.45  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.33   | 10.98             | 11.56  | 15.17  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.33   | 10.98             | 11.56  | 15.17  |

**Table A-3. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.55  | -1.71             | -1.69  | -1.93  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.97  | -1.07             | -1.06  | -1.21  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.22  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.48  | -0.53             | -0.52  | -0.60  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -2.01  | -2.21             | -2.19  | -2.51  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -1.55  | -1.71             | -1.69  | -1.93  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -3.86  | -4.25             | -4.20  | -4.81  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.80  | -0.88             | -0.87  | -1.00  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.69  | -0.75             | -0.75  | -0.85  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.93  | -2.05             | -2.05  | -2.32  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -8.55  | -8.41             | -8.40  | -9.24  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.87  | -8.37             | -8.37  | -9.44  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -3.84  | -4.07             | -4.07  | -4.59  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.37  | -1.46             | -1.46  | -1.65  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.50  | -0.48             | -0.48  | -0.52  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.07              | 0.07   | 0.10   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.20  | -0.16             | -0.16  | -0.17  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.42  | -3.63             | -3.63  | -4.10  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -4.26  | -4.52             | -4.52  | -5.10  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -4.26  | -4.52             | -4.52  | -5.10  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.82  | -0.87             | -0.87  | -0.98  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.80  | -0.85             | -0.85  | -0.96  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.62  | -0.66             | -0.66  | -0.74  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.41  | -0.43             | -0.43  | -0.49  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.56  | -1.66             | -1.66  | -1.88  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.42   | 21.33             | 21.67  | 30.97  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.29              | 0.29   | 0.38   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.24  | -1.31             | -1.31  | -1.48  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.42             | -0.42  | -0.48  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.60  | -3.66             | -3.66  | -4.08  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.82  | -4.06             | -4.06  | -4.58  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.11             | -0.11  | -0.13  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -41.58 | -44.21            | -44.23 | -49.90 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -37.94 | -40.33            | -40.36 | -45.53 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -41.61 | -44.24            | -44.27 | -49.94 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.40  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.30  | 2.26              | 2.30   | 3.49   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -18.48 | -19.64            | -19.66 | -22.17 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -18.21 | -19.36            | -19.37 | -21.86 |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -18.48 | -19.64            | -19.66 | -22.17 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 117.93 | 238.37            | 240.51 | 310.62 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 117.93 | 238.37            | 240.51 | 310.62 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 58.28  | 118.64            | 119.71 | 154.76 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.12  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.87  | -1.99             | -1.99  | -2.24  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.19  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 21.18  | 42.35             | 42.72  | 55.09  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 21.68  | 42.88             | 43.25  | 55.69  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.56  | -7.81             | -7.81  | -8.72  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -7.57  | -7.81             | -7.81  | -8.73  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -7.57  | -7.81             | -7.81  | -8.73  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.93  | -2.05             | -2.05  | -2.32  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -3.89  | -3.47             | -3.46  | -3.67  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -32.96 | -34.38            | -34.39 | -38.56 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -4.76  | -5.06             | -5.07  | -5.72  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.21  | 26.12             | 26.35  | 33.93  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -6.29  | -6.69             | -6.69  | -7.55  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.37  | -0.40             | -0.40  | -0.45  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.23  | -0.24             | -0.24  | -0.28  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.16  | 22.25             | 22.47  | 29.33  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.16  | 22.25             | 22.47  | 29.33  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.16  | 22.25             | 22.47  | 29.33  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.42  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.34  | -1.42             | -1.42  | -1.61  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.26  | -2.40             | -2.40  | -2.71  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.26  | -2.40             | -2.40  | -2.71  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.26  | -2.40             | -2.40  | -2.71  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -7.80  | -8.29             | -8.29  | -9.36  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -16.18 | -17.21            | -17.22 | -19.42 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -15.71 | -16.71            | -16.72 | -18.86 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.11  | -2.76             | -2.75  | -2.92  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 37.80             | 38.48  | 56.46  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.26   | 37.80             | 38.48  | 56.46  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.53  | 36.96             | 37.64  | 55.52  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.21  | -1.29             | -1.29  | -1.45  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.61  | -0.65             | -0.65  | -0.73  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.21  | -1.29             | -1.29  | -1.45  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.20  | -1.28             | -1.28  | -1.44  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.36 | -15.17            | -15.18 | -17.09 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -14.51 | -15.33            | -15.34 | -17.27 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -13.87 | -14.65            | -14.66 | -16.51 |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -9.47  | -9.84             | -9.84  | -11.01 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.88  | -2.00             | -2.01  | -2.26  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.61  | -1.72             | -1.72  | -1.94  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -5.83  | -6.20             | -6.20  | -6.99  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -18.26 | -19.41            | -19.42 | -21.91 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -18.24 | -19.39            | -19.41 | -21.89 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -16.77 | -17.84            | -17.85 | -20.13 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -16.63 | -17.68            | -17.69 | -19.96 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.30  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.17  | -3.22             | -3.22  | -3.59  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -12.92 | -13.74            | -13.75 | -15.51 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -12.92 | -13.74            | -13.75 | -15.51 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -11.66 | -12.40            | -12.41 | -14.00 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.44  | -0.46             | -0.46  | -0.52  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.43  | -0.45             | -0.45  | -0.51  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.24  | -4.50             | -4.51  | -5.08  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.80  | -6.17             | -6.17  | -6.96  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -45.69 | -48.17            | -48.19 | -54.22 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -46.64 | -49.17            | -49.20 | -55.35 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.79  | -8.28             | -8.28  | -9.35  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.75  | -7.17             | -7.18  | -8.10  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.33   | 16.87             | 17.15  | 24.73  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.11  | 12.48             | 12.77  | 19.90  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.11  | 12.48             | 12.77  | 19.90  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.61  | -1.80             | -1.74  | -0.89  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.92   | 4.08              | 4.14   | 5.75   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -27.84 | -26.47            | -26.44 | -28.73 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -27.20 | -25.79            | -25.75 | -27.96 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -27.20 | -25.79            | -25.75 | -27.96 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.23  | -0.24             | -0.24  | -0.27  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.81  | -0.86             | -0.86  | -0.97  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 17.31  | 34.33             | 34.63  | 44.60  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.68   | 5.43              | 5.47   | 7.07   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.29   | 4.86              | 4.93   | 6.77   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.71   | 7.43              | 7.50   | 9.67   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.52  | -1.61             | -1.61  | -1.82  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.46  | -1.56             | -1.56  | -1.76  |



**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.80  | -1.91             | -1.91  | -2.16  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -2.35  | -2.50             | -2.50  | -2.82  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.41   | 0.88              | 0.89   | 1.16   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.26   | 0.72              | 0.73   | 0.97   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -4.22  | -4.49             | -4.49  | -5.06  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.72  | -0.76             | -0.76  | -0.86  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.80  | -2.98             | -2.98  | -3.36  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.29  | -1.37             | -1.37  | -1.55  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -2.85  | -3.03             | -3.03  | -3.42  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.21  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -3.31  | -3.49             | -3.49  | -3.93  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.75  | -6.11             | -6.12  | -6.90  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.35  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.96   | 3.87              | 3.90   | 5.02   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -10.38 | -11.04            | -11.05 | -12.46 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -10.38 | -11.04            | -11.05 | -12.46 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -2.01  | -1.81             | -1.80  | -1.92  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.27  | -0.28             | -0.28  | -0.32  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.39  | -0.42             | -0.42  | -0.47  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.38  | -7.85             | -7.85  | -8.86  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.09  | -5.41             | -5.41  | -6.10  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.10              | 0.10   | 0.14   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.09              | 0.09   | 0.13   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.71  | -0.75             | -0.75  | -0.85  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.99  | -6.37             | -6.37  | -7.19  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.62  | -5.97             | -5.98  | -6.74  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.86  | -8.36             | -8.37  | -9.44  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -6.95  | -7.39             | -7.39  | -8.34  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.44  | -1.53             | -1.53  | -1.73  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.12  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 76.62  | 183.34            | 185.25 | 244.42 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 76.64  | 183.36            | 185.26 | 244.44 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.38  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 11.99  | 24.85             | 25.08  | 32.51  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 10.94  | 23.74             | 23.97  | 31.26  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.30  | -1.38             | -1.39  | -1.56  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.58  | -1.68             | -1.68  | -1.89  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.58  | -1.68             | -1.68  | -1.89  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.57  | -1.67             | -1.68  | -1.89  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.69   | 5.44              | 5.49   | 7.09   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.57  | -0.61             | -0.61  | -0.69  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -15.54 | -16.52            | -16.53 | -18.65 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -11.99 | -12.75            | -12.75 | -14.39 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -2.83  | -3.01             | -3.01  | -3.40  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.64  | -0.68             | -0.68  | -0.77  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.34  | -0.36             | -0.36  | -0.40  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.21  | -1.28             | -1.28  | -1.45  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.20  | -1.28             | -1.28  | -1.44  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.20  | -1.28             | -1.28  | -1.44  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.04   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.39  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.93  | -0.98             | -0.98  | -1.11  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.42             | -0.42  | -0.48  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.70  | -0.75             | -0.75  | -0.84  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.76  | -0.80             | -0.80  | -0.91  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.76  | -0.80             | -0.80  | -0.91  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.35  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.06  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.34  | -4.62             | -4.62  | -5.21  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -11.50 | -12.22            | -12.23 | -13.80 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.88  | -0.94             | -0.94  | -1.06  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.40   | 5.12              | 5.17   | 6.73   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.40   | 5.12              | 5.17   | 6.73   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.15  | -0.15             | -0.15  | -0.17  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.56  | -0.59             | -0.59  | -0.67  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.56  | -0.59             | -0.59  | -0.67  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.59  | -0.63             | -0.63  | -0.71  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.70  | -8.18             | -8.19  | -9.24  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.68  | -4.98             | -4.98  | -5.62  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.11  | -6.50             | -6.50  | -7.34  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.11  | -6.50             | -6.50  | -7.34  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.36  | -1.45             | -1.45  | -1.63  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.42  | -0.45             | -0.45  | -0.51  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.67  | -1.78             | -1.78  | -2.01  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.62  | 32.53             | 32.83  | 42.58  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.53  | 33.50             | 33.80  | 43.67  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.10  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -3.20  | -3.41             | -3.41  | -3.85  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.20  | -3.41             | -3.41  | -3.85  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.20  | -3.41             | -3.41  | -3.85  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.20  | -3.41             | -3.41  | -3.85  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.46  | -1.56             | -1.56  | -1.76  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.96  | -4.21             | -4.22  | -4.76  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -9.45  | -9.81             | -9.81  | -10.98 |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -9.54  | -9.90             | -9.91  | -11.09 |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.23  | -0.24             | -0.24  | -0.27  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 21.67  | 42.87             | 43.25  | 55.68  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 22.69  | 45.72             | 46.13  | 59.55  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.07              | 0.07   | 0.10   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.07              | 0.07   | 0.10   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 43.70  | 87.29             | 88.06  | 113.55 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.57  | -0.60             | -0.61  | -0.68  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.48  | -0.51             | -0.51  | -0.58  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.24  | -0.25             | -0.25  | -0.29  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -17.37 | 50.60             | 51.84  | 82.51  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 69.93  | 143.35            | 144.65 | 187.19 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 69.93  | 143.35            | 144.65 | 187.19 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -17.46 | 50.50             | 51.75  | 82.40  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | -17.45 | 50.51             | 51.75  | 82.41  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -17.43 | 50.53             | 51.78  | 82.44  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -17.44 | 50.52             | 51.76  | 82.42  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -17.37 | 50.60             | 51.84  | 82.51  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.74  | -8.22             | -8.22  | -9.27  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.47  | -7.93             | -7.93  | -8.94  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.66  | -0.70             | -0.70  | -0.79  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.87  | 41.04             | 41.42  | 53.65  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.47  | -1.56             | -1.56  | -1.76  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.47  | -1.56             | -1.56  | -1.76  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.57  | 23.12             | 23.33  | 30.08  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.50  | -0.54             | -0.54  | -0.60  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.74  | -0.79             | -0.79  | -0.89  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -22.25 | -23.66            | -23.67 | -26.70 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.69  | -2.86             | -2.86  | -3.23  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.71  | -0.76             | -0.76  | -0.85  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.56   | 17.00             | 17.15  | 22.10  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.59  | -2.75             | -2.75  | -3.10  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.64  | -0.68             | -0.68  | -0.77  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.04   | 10.99             | 11.13  | 15.26  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.19   | 10.09             | 10.23  | 14.25  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.04   | 8.87              | 9.01   | 12.87  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -9.91  | -10.27            | -10.27 | -11.49 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.16  | -7.46             | -7.46  | -8.36  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.56   | 20.41             | 20.75  | 29.93  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.01   | 4.50              | 4.54   | 5.94   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.04   | 4.52              | 4.57   | 5.97   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.05  | -1.10             | -1.10  | -1.24  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.63  | -0.67             | -0.67  | -0.76  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.20  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.24  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.20  | -0.15             | -0.15  | -0.15  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.04  | -1.11             | -1.11  | -1.25  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.14  | -1.21             | -1.21  | -1.37  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.49  | -0.52             | -0.52  | -0.59  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -11.39 | -12.11            | -12.12 | -13.67 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.83  | -0.89             | -0.89  | -1.00  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.83  | -0.89             | -0.89  | -1.00  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.29  | -5.63             | -5.63  | -6.35  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.13              | 0.14   | 0.18   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.44  | -3.66             | -3.66  | -4.13  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -86.27 | -81.58            | -81.45 | -88.35 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -45.38 | -40.18            | -40.06 | -42.38 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -86.65 | -81.98            | -81.86 | -88.81 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -86.44 | -81.76            | -81.63 | -88.56 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -86.27 | -81.58            | -81.45 | -88.35 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.42  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -9.93  | -10.56            | -10.57 | -11.92 |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.39  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.39  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.62  | -0.66             | -0.66  | -0.74  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.21  | -1.29             | -1.29  | -1.45  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.60  | -0.64             | -0.64  | -0.72  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.50  | -0.53             | -0.53  | -0.60  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.42   | 3.50              | 3.54   | 4.68   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 14.87  | 34.63             | 34.98  | 46.00  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 48.30  | 119.32            | 120.59 | 159.69 |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 48.30  | 119.32            | 120.59 | 159.69 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 32.16  | 102.17            | 103.43 | 140.32 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 34.95  | 105.13            | 106.39 | 143.67 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -21.26 | -22.60            | -22.61 | -25.51 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -22.34 | -23.75            | -23.77 | -26.81 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -22.32 | -23.73            | -23.75 | -26.79 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.39              | 0.39   | 0.51   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.42  | -0.45             | -0.45  | -0.51  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.56  | -2.72             | -2.72  | -3.07  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.96  | -0.97             | -0.97  | -1.08  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -10.72 | -10.26            | -10.24 | -11.15 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -10.72 | -10.26            | -10.24 | -11.15 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -9.65  | -9.11             | -9.10  | -9.87  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -9.65  | -9.11             | -9.10  | -9.87  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.23  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -7.12  | -7.55             | -7.56  | -8.52  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -4.43  | -4.68             | -4.69  | -5.28  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.98  | -6.35             | -6.36  | -7.17  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.59  | -0.62             | -0.62  | -0.71  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.83  | -6.18             | -6.18  | -6.97  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.42  | -0.44             | -0.44  | -0.50  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -2.42  | -2.57             | -2.58  | -2.90  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -8.42  | -8.96             | -8.96  | -10.11 |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -14.25 | -15.16            | -15.17 | -17.11 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -2.66  | -2.83             | -2.83  | -3.19  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -2.66  | -2.83             | -2.83  | -3.19  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -2.66  | -2.83             | -2.83  | -3.19  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.93  | -2.05             | -2.06  | -2.32  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -6.18  | -4.38             | -4.35  | -4.15  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.61  | -2.78             | -2.78  | -3.13  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.61  | -2.78             | -2.78  | -3.13  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -3.05  | -3.24             | -3.24  | -3.66  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | -17.00 | 50.99             | 52.24  | 82.95  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.81  | -8.30             | -8.31  | -9.37  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.87  | -1.98             | -1.98  | -2.24  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.62  | -0.66             | -0.66  | -0.75  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.60              | 0.60   | 0.81   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -7.80  | -8.29             | -8.30  | -9.36  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.53  | -8.01             | -8.02  | -9.04  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -8.41  | -3.39             | -3.29  | -1.78  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -8.41  | -3.39             | -3.29  | -1.79  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.23  | -3.20             | -3.11  | -1.57  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.57  | -1.67             | -1.67  | -1.88  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.32   | 7.35              | 7.43   | 9.71   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.54  | -0.13             | -0.05  | 1.57   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.52  | 2.21              | 2.28   | 3.90   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -1.52  | 2.21              | 2.28   | 3.90   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -3.23  | -3.43             | -3.43  | -3.87  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -20.41 | -21.70            | -21.71 | -24.50 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.44 | -21.73            | -21.75 | -24.53 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -20.43 | -21.72            | -21.74 | -24.52 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 51.48  | 138.38            | 139.93 | 186.96 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 51.69  | 138.60            | 140.16 | 187.21 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 51.48  | 138.38            | 139.93 | 186.96 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.94  | 142.06            | 143.62 | 191.12 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -23.96 | -22.76            | -22.72 | -24.69 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -23.96 | -22.76            | -22.72 | -24.69 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -23.96 | -22.76            | -22.72 | -24.69 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -23.96 | -22.75            | -22.72 | -24.68 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -23.96 | -22.75            | -22.72 | -24.68 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.48   | 0.96              | 0.97   | 1.25   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.58  | -5.93             | -5.93  | -6.69  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.55  | -1.65             | -1.65  | -1.86  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -16.53 | -17.39            | -17.40 | -19.56 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.45  | -2.43             | -2.42  | -2.67  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.77  | -0.82             | -0.82  | -0.92  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.77  | -0.82             | -0.82  | -0.92  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.19  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.31  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.31  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.11  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.02  | -3.21             | -3.21  | -3.63  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.72  | -1.83             | -1.83  | -2.07  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.78  | -1.89             | -1.89  | -2.13  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -6.46  | -6.87             | -6.87  | -7.75  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.05  | -1.12             | -1.12  | -1.26  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 39.86  | 78.94             | 79.63  | 102.55 |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -5.17  | -5.50             | -5.50  | -6.21  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -5.70  | 4.78              | 4.97   | 9.38   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -5.56  | 4.92              | 5.12   | 9.54   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -5.56  | 4.92              | 5.12   | 9.54   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.30  | -1.38             | -1.39  | -1.56  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.42  | -0.45             | -0.45  | -0.51  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.66  | -0.62             | -0.62  | -0.67  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.66  | -0.62             | -0.62  | -0.67  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.66  | -0.62             | -0.62  | -0.67  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.07  | -2.14             | -2.14  | -2.39  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.05             | -0.05  | -0.05  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.30  | -3.50             | -3.50  | -3.94  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.10  | 0.55              | 0.56   | 0.86   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.52   | 1.21              | 1.22   | 1.60   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.59  | -0.63             | -0.63  | -0.71  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.44  | -0.47             | -0.47  | -0.52  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.38  | 38.39             | 38.76  | 50.66  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.55  | -0.58             | -0.58  | -0.65  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.16  | -5.49             | -5.49  | -6.20  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.30  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.15  | -0.12             | -0.11  | -0.11  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.42  | -2.57             | -2.58  | -2.90  |



**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.64  | -1.74             | -1.74  | -1.97  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 71.02  | 144.51            | 145.81 | 188.50 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -4.46  | -4.74             | -4.74  | -5.34  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.10  | 0.55              | 0.56   | 0.86   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.34  | -0.36             | -0.36  | -0.40  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.30   | 10.51             | 10.60  | 13.65  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.24   | 10.45             | 10.55  | 13.60  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.22   | 10.44             | 10.53  | 13.58  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.00  | -4.26             | -4.26  | -4.81  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -29.54 | -31.40            | -31.42 | -35.44 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -29.48 | -31.34            | -31.36 | -35.38 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -29.02 | -30.86            | -30.87 | -34.83 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.91  | -2.03             | -2.03  | -2.29  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.61  | -0.65             | -0.65  | -0.73  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.74   | 6.01              | 6.07   | 7.93   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.54  | -0.57             | -0.57  | -0.65  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.22   | 15.57             | 15.72  | 20.49  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.22   | 15.57             | 15.72  | 20.49  |

**Table A-4. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.24  | -2.39             | -2.39  | -2.69  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.47  | -1.57             | -1.57  | -1.77  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.27  | -0.28             | -0.28  | -0.32  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.70  | -0.74             | -0.74  | -0.84  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -2.91  | -3.10             | -3.10  | -3.50  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -2.24  | -2.39             | -2.39  | -2.69  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -5.59  | -5.94             | -5.95  | -6.71  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.16  | -1.24             | -1.24  | -1.40  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.98  | -1.05             | -1.05  | -1.18  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.31   | 0.37   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.20   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.20   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.24   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.84   | 1.09              | 1.18   | 1.41   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.84   | 1.09              | 1.18   | 1.41   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 12.59  | 16.39             | 17.76  | 21.18  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.27   | 1.66              | 1.80   | 2.14   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.27   | 1.65              | 1.79   | 2.14   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.14   | 0.17              | 0.18   | 0.22   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.17              | 0.19   | 0.22   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.18   | 0.21   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.18   | 0.21   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.18   | 0.21   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.73   | 3.55              | 3.84   | 4.58   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.73   | 3.55              | 3.84   | 4.58   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.73   | 3.55              | 3.84   | 4.58   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.09   | 0.10   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.15   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.21   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.21   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.12   | 0.15   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.15   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.20   | 0.26              | 0.27   | 0.33   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.27              | 0.27   | 0.33   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.21   | 0.28              | 0.29   | 0.35   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.30              | 0.31   | 0.38   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.30              | 0.31   | 0.38   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.20   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.21   | 0.27              | 0.29   | 0.34   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.34   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.34   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.54   | 0.71              | 0.77   | 0.91   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.13   | 0.17              | 0.19   | 0.22   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.11   | 0.13   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |



**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.83   | 3.69              | 3.98   | 4.75   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.83   | 3.69              | 3.98   | 4.75   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.17              | 0.19   | 0.22   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.55   | 0.72              | 0.77   | 0.92   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.71              | 0.77   | 0.92   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance,                                 | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.27   | 1.65              | 1.79   | 2.14   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.06   | 2.69              | 2.91   | 3.47   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.34              | 0.36   | 0.43   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.75   | 2.27              | 2.43   | 2.91   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.48   | 1.93              | 2.09   | 2.49   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.48   | 1.93              | 2.09   | 2.49   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.75   | 2.27              | 2.43   | 2.91   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.75   | 2.27              | 2.43   | 2.91   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.75   | 2.27              | 2.43   | 2.91   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.75   | 2.27              | 2.43   | 2.91   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.75   | 2.27              | 2.43   | 2.91   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.02              | 1.11   | 1.32   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.53   | 1.99              | 2.16   | 2.58   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.06   | 10.49             | 11.37  | 13.55  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.30              | 0.31   | 0.38   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance,                                 | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.04   | 0.05   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.50   | 0.65              | 0.67   | 0.81   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.21   | 0.27              | 0.27   | 0.33   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.50   | 0.65              | 0.67   | 0.81   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.50   | 0.65              | 0.67   | 0.81   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.50   | 0.65              | 0.67   | 0.81   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.23   | 0.27   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.33   | 0.43              | 0.47   | 0.56   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.42   | 4.45              | 4.82   | 5.75   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.42   | 4.45              | 4.82   | 5.75   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.47   | 4.52              | 4.88   | 5.83   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.46   | 4.51              | 4.87   | 5.81   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.13   | 0.17              | 0.18   | 0.22   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.13   | 0.17              | 0.18   | 0.22   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.75   | 2.27              | 2.43   | 2.91   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.59   | 2.07              | 2.24   | 2.67   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.59   | 2.07              | 2.24   | 2.67   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.59   | 2.07              | 2.24   | 2.67   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.07   | 1.39              | 1.51   | 1.80   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.28   | 1.66              | 1.80   | 2.14   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.09   | 1.41              | 1.53   | 1.82   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.09   | 1.41              | 1.53   | 1.82   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.26   | 2.93              | 3.17   | 3.78   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.25   | 2.93              | 3.16   | 3.78   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.26   | 2.93              | 3.17   | 3.78   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.24   | 2.92              | 3.15   | 3.76   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.22   | 0.28              | 0.29   | 0.35   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.22   | 0.28              | 0.29   | 0.35   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.22   | 0.28              | 0.29   | 0.35   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.28              | 0.29   | 0.35   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.28              | 0.29   | 0.35   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.28   | 0.36              | 0.39   | 0.46   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.59   | 2.06              | 2.23   | 2.66   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.58   | 2.06              | 2.23   | 2.66   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.58   | 2.06              | 2.23   | 2.66   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance,                                 | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.79   | 1.03              | 1.12   | 1.34   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.49   | 1.93              | 2.09   | 2.50   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.31   | 1.71              | 1.85   | 2.21   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.31   | 1.71              | 1.85   | 2.21   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.31   | 1.71              | 1.85   | 2.21   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.11   | 0.14   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.20   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.06   | 10.49             | 11.37  | 13.56  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.06   | 10.49             | 11.37  | 13.56  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-5. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.19              | 0.24   | 0.33   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.59   | 0.94              | 1.15   | 1.62   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.50   | 0.80              | 0.97   | 1.37   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.26   | 0.42              | 0.52   | 0.72   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.08   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.35              | 0.42   | 0.60   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.43              | 0.53   | 0.74   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.27   | 0.43              | 0.53   | 0.74   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.12   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.16              | 0.19   | 0.27   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.89   | 7.83              | 9.70   | 13.34  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.13              | 0.15   | 0.22   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.38              | 0.47   | 0.66   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.39              | 0.47   | 0.67   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.63   | 4.22              | 5.15   | 7.24   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.40   | 3.85              | 4.70   | 6.61   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.63   | 4.23              | 5.16   | 7.25   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.13   | 5.02              | 6.24   | 8.54   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.17   | 1.88              | 2.29   | 3.22   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.15   | 1.85              | 2.25   | 3.17   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.17   | 1.88              | 2.29   | 3.22   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 18.54  | 29.70             | 36.94  | 50.47  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 18.54  | 29.70             | 36.94  | 50.47  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 278.06 | 445.57            | 554.32 | 756.99 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.33   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 28.11  | 45.04             | 56.03  | 76.52  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 28.07  | 44.98             | 55.97  | 76.43  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 0.84              | 1.02   | 1.43   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.52   | 0.84              | 1.02   | 1.44   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.52   | 0.84              | 1.02   | 1.44   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.24   | 0.33   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.99   | 1.59              | 1.97   | 2.71   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.84   | 4.55              | 5.58   | 7.78   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.30   | 0.48              | 0.59   | 0.83   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.91   | 4.66              | 5.79   | 7.91   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.40   | 0.64              | 0.78   | 1.10   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.77   | 4.44              | 5.52   | 7.55   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.77   | 4.44              | 5.52   | 7.55   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.77   | 4.44              | 5.52   | 7.55   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.14              | 0.17   | 0.23   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.79              | 0.97   | 1.36   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.02   | 1.64              | 1.99   | 2.81   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.99   | 1.58              | 1.93   | 2.72   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.23   | 0.38              | 0.46   | 0.65   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 60.10  | 96.30             | 119.71 | 163.68 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 60.10  | 96.30             | 119.71 | 163.68 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 60.15  | 96.38             | 119.81 | 163.82 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.40   | 2.25              | 2.77   | 3.85   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.41   | 2.27              | 2.79   | 3.88   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.37   | 2.20              | 2.71   | 3.77   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.61   | 0.99              | 1.20   | 1.69   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.33   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.16              | 0.20   | 0.28   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.01   | 3.22              | 3.99   | 5.48   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.80   | 4.49              | 5.53   | 7.65   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.80   | 4.48              | 5.53   | 7.65   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.70   | 4.34              | 5.35   | 7.40   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.69   | 4.32              | 5.33   | 7.37   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.34              | 0.41   | 0.58   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.85   | 1.36              | 1.66   | 2.34   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.85   | 1.36              | 1.66   | 2.34   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.77   | 1.24              | 1.51   | 2.12   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.08   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.93   | 3.09              | 3.83   | 5.25   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.01   | 3.22              | 3.99   | 5.48   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.28   | 6.87              | 8.43   | 11.74  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.34   | 6.96              | 8.55   | 11.91  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 0.83              | 1.02   | 1.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.45   | 0.73              | 0.89   | 1.25   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.62   | 7.40              | 9.17   | 12.60  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.95   | 7.94              | 9.82   | 13.52  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.95   | 7.94              | 9.82   | 13.52  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.17   | 5.09              | 6.31   | 8.66   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.65   | 4.24              | 5.28   | 7.21   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.52   | 7.24              | 8.93   | 12.36  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.48   | 7.18              | 8.85   | 12.24  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.48   | 7.18              | 8.85   | 12.24  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.12   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.00  | 19.23             | 23.93  | 32.68  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.95   | 4.73              | 5.88   | 8.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.75   | 2.80              | 3.47   | 4.76   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.59   | 2.54              | 3.16   | 4.32   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.15              | 0.19   | 0.26   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |



**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.11   | 0.18              | 0.22   | 0.31   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.15   | 0.23              | 0.28   | 0.40   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.16   | 0.26              | 0.32   | 0.44   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.17   | 0.27              | 0.34   | 0.47   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.27   | 0.43              | 0.52   | 0.74   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.09   | 0.13   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.18   | 0.28              | 0.35   | 0.49   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.08   | 0.13              | 0.16   | 0.23   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.29              | 0.35   | 0.50   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.22   | 0.36              | 0.44   | 0.61   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.36   | 0.58              | 0.71   | 1.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.16   | 0.25              | 0.31   | 0.43   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.66   | 1.06              | 1.29   | 1.82   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.66   | 1.06              | 1.29   | 1.81   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.18   | 0.29              | 0.36   | 0.50   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.75              | 0.91   | 1.29   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.32   | 0.52              | 0.63   | 0.89   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.38   | 0.61              | 0.74   | 1.04   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.36   | 0.57              | 0.70   | 0.98   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.50   | 0.80              | 0.97   | 1.37   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.44   | 0.70              | 0.86   | 1.21   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.25   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 62.39  | 99.97             | 124.29 | 169.91 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.39  | 99.97             | 124.29 | 169.90 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.99   | 4.78              | 5.95   | 8.13   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.05   | 4.89              | 6.08   | 8.31   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.22   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.16              | 0.20   | 0.27   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.16              | 0.20   | 0.27   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.16              | 0.19   | 0.27   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.95   | 4.73              | 5.88   | 8.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.98   | 1.58              | 1.92   | 2.71   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.76   | 1.22              | 1.49   | 2.09   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.19   | 0.30              | 0.37   | 0.52   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.09              | 0.11   | 0.16   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.06   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.13   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.13   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.27   | 0.44              | 0.54   | 0.76   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.73   | 1.17              | 1.43   | 2.01   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.06   | 0.09              | 0.11   | 0.15   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.97   | 4.77              | 5.93   | 8.10   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.97   | 4.77              | 5.93   | 8.10   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.49   | 0.78              | 0.95   | 1.34   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.30   | 0.47              | 0.58   | 0.81   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.39   | 0.62              | 0.76   | 1.07   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.62              | 0.76   | 1.07   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.17              | 0.21   | 0.29   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.12  | 19.43             | 24.16  | 33.01  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.07  | 19.34             | 24.05  | 32.85  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.20   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.20   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.20   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.20   | 0.33              | 0.40   | 0.56   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.40              | 0.49   | 0.69   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.61   | 0.98              | 1.20   | 1.69   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.62   | 1.00              | 1.21   | 1.71   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 28.07  | 44.99             | 55.97  | 76.43  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 45.58  | 73.03             | 90.85  | 124.07 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.68   | 9.11              | 11.33  | 15.47  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 38.23  | 61.28             | 76.01  | 104.26 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 32.75  | 52.48             | 65.27  | 89.16  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 32.75  | 52.48             | 65.27  | 89.16  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 38.24  | 61.29             | 76.02  | 104.28 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 38.24  | 61.29             | 76.02  | 104.28 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 38.24  | 61.29             | 76.02  | 104.27 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 38.24  | 61.29             | 76.02  | 104.27 |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 38.23  | 61.28             | 76.01  | 104.26 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.49   | 0.79              | 0.96   | 1.35   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.76              | 0.93   | 1.30   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.38  | 27.85             | 34.64  | 47.31  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.26   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.26   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 33.82  | 54.19             | 67.41  | 92.06  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.13   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.41   | 2.26              | 2.76   | 3.88   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.28              | 0.34   | 0.48   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.09   | 0.12   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 177.92 | 285.10            | 354.69 | 484.37 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.16   | 0.26              | 0.32   | 0.45   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.04   | 1.66              | 2.05   | 2.83   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.09   | 1.75              | 2.16   | 2.98   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.16   | 1.86              | 2.30   | 3.17   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.65   | 1.04              | 1.26   | 1.78   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.46   | 0.74              | 0.91   | 1.28   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.94   | 7.91              | 9.80   | 13.48  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.22   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.13   | 0.18   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.72   | 1.16              | 1.41   | 1.98   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.16   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.16   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.54              | 0.66   | 0.92   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.35              | 0.43   | 0.60   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.59  | 16.98             | 20.88  | 29.01  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 4.33   | 6.95              | 8.51   | 11.89  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 10.62  | 17.03             | 20.95  | 29.10  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 10.60  | 17.00             | 20.91  | 29.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.59  | 16.98             | 20.88  | 29.01  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.63   | 1.01              | 1.23   | 1.73   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.11   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.56   | 5.70              | 7.09   | 9.68   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.33   | 11.74             | 14.59  | 19.95  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 75.46  | 120.93            | 150.38 | 205.49 |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 75.46  | 120.93            | 150.38 | 205.49 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 76.48  | 122.56            | 152.37 | 208.29 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 76.30  | 122.27            | 152.02 | 207.79 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.35   | 2.17              | 2.64   | 3.72   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.42   | 2.27              | 2.77   | 3.90   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.42   | 2.27              | 2.77   | 3.89   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.25              | 0.30   | 0.43   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.86   | 4.59              | 5.68   | 7.81   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.86   | 4.59              | 5.68   | 7.81   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.79   | 4.48              | 5.54   | 7.62   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.79   | 4.48              | 5.54   | 7.62   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.46   | 0.74              | 0.90   | 1.27   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.29   | 0.46              | 0.56   | 0.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.61              | 0.74   | 1.04   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.37   | 0.59              | 0.72   | 1.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.25              | 0.30   | 0.42   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.53   | 0.86              | 1.04   | 1.47   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.90   | 1.45              | 1.76   | 2.48   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.17   | 0.27              | 0.33   | 0.46   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.27              | 0.33   | 0.46   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.17   | 0.27              | 0.33   | 0.46   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.13   | 0.20              | 0.25   | 0.35   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.54   | 0.87              | 1.06   | 1.49   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.28              | 0.34   | 0.48   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.28              | 0.34   | 0.48   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.20   | 0.33              | 0.40   | 0.56   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 38.21  | 61.24             | 75.96  | 104.19 |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.49   | 0.79              | 0.97   | 1.36   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.33   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.52   | 0.83              | 1.02   | 1.43   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.48   | 0.77              | 0.93   | 1.31   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 35.05  | 56.17             | 69.84  | 95.45  |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 35.05  | 56.17             | 69.84  | 95.45  |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 35.04  | 56.14             | 69.81  | 95.41  |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.19   | 0.26   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.65  | 37.89             | 47.14  | 64.37  |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 28.12  | 45.06             | 56.04  | 76.57  |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 23.95  | 38.37             | 47.72  | 65.20  |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 23.95  | 38.37             | 47.72  | 65.20  |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.38              | 0.46   | 0.65   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.29   | 2.07              | 2.53   | 3.55   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.29   | 2.08              | 2.53   | 3.56   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.29   | 2.07              | 2.53   | 3.56   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 49.60  | 79.49             | 98.79  | 135.11 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 49.59  | 79.47             | 98.77  | 135.08 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 49.60  | 79.49             | 98.79  | 135.11 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 49.39  | 79.14             | 98.37  | 134.51 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 4.65   | 7.45              | 9.21   | 12.71  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.65   | 7.45              | 9.21   | 12.71  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.65   | 7.45              | 9.21   | 12.71  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.65   | 7.45              | 9.21   | 12.71  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.65   | 7.45              | 9.21   | 12.71  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.01   | 1.61              | 2.00   | 2.74   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.35   | 0.57              | 0.69   | 0.97   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.16              | 0.19   | 0.27   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1.06   | 1.70              | 2.08   | 2.92   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.28              | 0.34   | 0.47   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.19   | 0.31              | 0.37   | 0.53   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.18              | 0.22   | 0.31   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.32   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.41   | 0.66              | 0.80   | 1.13   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.06   | 0.10              | 0.12   | 0.17   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.08   | 9.74              | 12.12  | 16.55  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.34   | 0.54              | 0.66   | 0.93   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 34.92  | 55.95             | 69.57  | 95.09  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 34.91  | 55.94             | 69.55  | 95.07  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 34.91  | 55.94             | 69.55  | 95.07  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.08   | 0.13              | 0.16   | 0.23   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.24              | 0.29   | 0.41   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.32   | 0.51              | 0.64   | 0.87   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.34              | 0.41   | 0.58   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.05   | 0.08   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.53  | 28.09             | 34.93  | 47.73  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.09   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.52              | 0.64   | 0.90   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.25              | 0.30   | 0.42   |



**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.17              | 0.20   | 0.29   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 32.77  | 52.51             | 65.32  | 89.22  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.39   | 0.62              | 0.77   | 1.07   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.00  | 46.47             | 57.81  | 78.95  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.01  | 46.48             | 57.82  | 78.96  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 29.01  | 46.48             | 57.83  | 78.97  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.41              | 0.50   | 0.70   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.87   | 3.00              | 3.66   | 5.15   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.87   | 3.00              | 3.65   | 5.14   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.84   | 2.95              | 3.60   | 5.06   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.13   | 0.20              | 0.25   | 0.35   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.56   | 4.11              | 5.11   | 6.98   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.09   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 178.01 | 285.24            | 354.86 | 484.60 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 178.01 | 285.24            | 354.86 | 484.60 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-6. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.18   | 0.30              | 0.36   | 0.51   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.35   | 0.57              | 0.69   | 0.97   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.10              | 0.12   | 0.17   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.32   | 0.61              | 0.63   | 0.84   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.54   | 2.95              | 3.06   | 4.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.30   | 2.49              | 2.59   | 3.42   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.69   | 1.32              | 1.37   | 1.81   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.43              | 0.45   | 0.60   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.16              | 0.16   | 0.22   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.57   | 1.09              | 1.13   | 1.49   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.71   | 1.35              | 1.40   | 1.85   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.71   | 1.35              | 1.40   | 1.85   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.14   | 0.26              | 0.27   | 0.36   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.25              | 0.26   | 0.35   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.21              | 0.22   | 0.29   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.18   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.50              | 0.51   | 0.68   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.09  | 24.94             | 26.10  | 33.89  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.22              | 0.23   | 0.30   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.39              | 0.41   | 0.54   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.62   | 1.19              | 1.24   | 1.64   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.63   | 1.21              | 1.26   | 1.66   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.05              | 0.05   | 0.06   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.87   | 13.18             | 13.68  | 18.06  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.27   | 12.02             | 12.48  | 16.48  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.88   | 13.19             | 13.69  | 18.08  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.11              | 0.11   | 0.14   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.44   | 16.07             | 16.84  | 21.79  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.06   | 5.86              | 6.08   | 8.03   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.01   | 5.77              | 5.99   | 7.91   |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.06   | 5.86              | 6.08     | 8.03     |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 50.01  | 95.13             | 99.75    | 128.93   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 50.01  | 95.13             | 99.75    | 128.93   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 750.60 | 1,427.71          | 1,497.30 | 1,934.68 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03     | 0.04     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09     | 0.12     |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.59              | 0.62     | 0.81     |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05     | 0.07     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 75.87  | 144.31            | 151.34   | 195.55   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 75.78  | 144.15            | 151.17   | 195.33   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.36   | 2.61              | 2.71     | 3.58     |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.37   | 2.62              | 2.72     | 3.58     |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.37   | 2.62              | 2.72     | 3.58     |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.61              | 0.63     | 0.84     |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02     | 0.03     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 2.66   | 5.07              | 5.31     | 6.90     |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 7.47   | 14.30             | 14.88    | 19.54    |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.79   | 1.51              | 1.57     | 2.07     |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.85   | 14.92             | 15.65    | 20.22    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.04   | 2.00              | 2.07     | 2.74     |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02     | 0.02     |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.47   | 14.21             | 14.89  | 19.26  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.47   | 14.21             | 14.89  | 19.26  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.47   | 14.21             | 14.89  | 19.26  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.11              | 0.12   | 0.15   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.42              | 0.44   | 0.58   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.37   | 0.71              | 0.74   | 0.98   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.37   | 0.71              | 0.74   | 0.98   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.37   | 0.71              | 0.74   | 0.98   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.29   | 2.47              | 2.56   | 3.39   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.67   | 5.12              | 5.31   | 7.01   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.59   | 4.96              | 5.15   | 6.80   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.61   | 1.18              | 1.22   | 1.61   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 162.00 | 308.24            | 323.13 | 417.90 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 162.00 | 308.24            | 323.13 | 417.90 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 162.13 | 308.49            | 323.39 | 418.24 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.53   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.18              | 0.18   | 0.24   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.53   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.20   | 0.38              | 0.39   | 0.52   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.71   | 7.09              | 7.39   | 9.68   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.74   | 7.14              | 7.44   | 9.75   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.63   | 6.94              | 7.23   | 9.47   |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.61   | 3.08              | 3.20   | 4.22   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.60              | 0.62   | 0.82   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.51              | 0.53   | 0.70   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.40   | 10.28             | 10.76  | 13.95  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 7.45   | 14.22             | 14.85  | 19.36  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.45   | 14.21             | 14.84  | 19.35  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.21   | 13.75             | 14.37  | 18.72  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.18   | 13.70             | 14.31  | 18.65  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.55   | 1.05              | 1.09   | 1.44   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.22   | 4.26              | 4.42   | 5.83   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.22   | 4.26              | 4.42   | 5.83   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.01   | 3.86              | 4.01   | 5.29   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.19   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.16              | 0.16   | 0.21   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.16   | 9.82              | 10.29  | 13.33  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.39   | 10.27             | 10.75  | 13.94  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 11.30  | 21.61             | 22.51  | 29.51  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 11.46  | 21.91             | 22.82  | 29.92  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.36   | 2.60              | 2.70   | 3.56   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.19   | 2.27              | 2.36   | 3.11   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 12.38  | 23.58             | 24.68  | 32.03  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.26  | 25.26             | 26.43  | 34.33  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.26  | 25.26             | 26.43  | 34.33  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.40   | 16.00             | 16.75  | 21.73  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.18   | 13.66             | 14.32  | 18.52  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 12.02  | 22.94             | 23.95  | 31.24  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.91  | 22.73             | 23.74  | 30.96  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 11.91  | 22.73             | 23.74  | 30.96  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.07              | 0.07   | 0.09   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.23              | 0.24   | 0.32   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 32.40  | 61.63             | 64.64  | 83.52  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 7.96   | 15.14             | 15.88  | 20.51  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.69   | 8.92              | 9.35   | 12.10  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.28   | 8.13              | 8.53   | 11.02  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.25   | 0.48              | 0.50   | 0.66   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.45              | 0.47   | 0.62   |



**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.30   | 0.57              | 0.59   | 0.78   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.38   | 0.73              | 0.76   | 1.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.43   | 0.83              | 0.87   | 1.12   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.46   | 0.87              | 0.92   | 1.19   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.70   | 1.34              | 1.39   | 1.83   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.23              | 0.24   | 0.32   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.46   | 0.89              | 0.92   | 1.22   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.21   | 0.41              | 0.43   | 0.56   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.47   | 0.90              | 0.94   | 1.24   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.58   | 1.11              | 1.15   | 1.52   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.95   | 1.82              | 1.89   | 2.50   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.42   | 0.81              | 0.84   | 1.09   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.72   | 3.30              | 3.42   | 4.52   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.72   | 3.30              | 3.42   | 4.52   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.48   | 0.91              | 0.95   | 1.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.09   | 0.12   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.12              | 0.13   | 0.17   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.22   | 2.34              | 2.43   | 3.20   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.84   | 1.61              | 1.67   | 2.21   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.23   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.17              | 0.18   | 0.23   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.12   | 0.22              | 0.23   | 0.31   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.99   | 1.90              | 1.97   | 2.60   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.93   | 1.78              | 1.85   | 2.44   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.30   | 2.49              | 2.59   | 3.42   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.15   | 2.20              | 2.28   | 3.01   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.24   | 0.46              | 0.47   | 0.63   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 168.22 | 320.05            | 335.53 | 433.86 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 168.21 | 320.04            | 335.53 | 433.86 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.10              | 0.11   | 0.14   |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 8.05   | 15.32             | 16.06  | 20.76  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 8.22   | 15.65             | 16.40  | 21.22  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.21   | 0.41              | 0.42   | 0.56   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.26   | 0.50              | 0.52   | 0.68   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.50              | 0.52   | 0.68   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.26   | 0.50              | 0.52   | 0.68   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 7.96   | 15.13             | 15.87  | 20.51  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.18              | 0.19   | 0.25   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.57   | 4.92              | 5.11   | 6.75   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance,                                 | 100                                       | 0  | 1.98   | 3.80              | 3.94   | 5.21   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.48   | 0.93              | 0.96   | 1.27   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.21   | 0.28   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.11   | 0.14   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.37              | 0.39   | 0.51   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.20   | 0.38              | 0.40   | 0.52   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.20   | 0.38              | 0.40   | 0.52   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.11   | 0.14   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.15   | 0.29              | 0.30   | 0.40   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.12   | 0.22              | 0.23   | 0.30   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.33   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.33   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.72   | 1.38              | 1.43   | 1.89   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.91   | 3.65              | 3.79   | 5.01   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.15   | 0.28              | 0.29   | 0.38   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.01   | 15.24             | 15.98  | 20.66  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.01   | 15.24             | 15.98  | 20.66  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.05              | 0.05   | 0.06   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.06   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.14              | 0.15   | 0.20   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.16              | 0.16   | 0.22   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.27   | 2.44              | 2.53   | 3.34   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.77   | 1.48              | 1.54   | 2.03   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.01   | 1.94              | 2.01   | 2.66   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.01   | 1.94              | 2.01   | 2.66   |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.22   | 0.43              | 0.45   | 0.59   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.19   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.53              | 0.55   | 0.73   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 32.70  | 62.21             | 65.23  | 84.30  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 32.55  | 61.92             | 64.94  | 83.91  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.53   | 1.02              | 1.05   | 1.39   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.53   | 1.02              | 1.05   | 1.39   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.53   | 1.02              | 1.05   | 1.39   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.53   | 1.02              | 1.05   | 1.39   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.45              | 0.47   | 0.62   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.66   | 1.26              | 1.30   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.60   | 3.07              | 3.19   | 4.21   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.62   | 3.11              | 3.23   | 4.26   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 75.78  | 144.15            | 151.18 | 195.33 |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 123.03 | 234.01            | 245.41 | 317.10 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.04   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.34  | 29.17             | 30.59  | 39.54  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.18              | 0.19   | 0.25   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.09   | 0.11   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 102.74 | 195.64            | 204.86 | 265.57 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 88.35  | 168.06            | 176.24 | 227.77 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 88.35  | 168.06            | 176.24 | 227.77 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 102.75 | 195.67            | 204.89 | 265.60 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 102.75 | 195.66            | 204.89 | 265.60 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 102.75 | 195.66            | 204.88 | 265.59 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 102.75 | 195.66            | 204.89 | 265.60 |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 102.74 | 195.64            | 204.86 | 265.57   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.28   | 2.46              | 2.55   | 3.37     |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.24   | 2.37              | 2.46   | 3.25     |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.21   | 0.28     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 46.89  | 89.20             | 93.54  | 120.88   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.46              | 0.48   | 0.64     |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.24   | 0.46              | 0.48   | 0.64     |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 91.28  | 173.63            | 182.09 | 235.28   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.23     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.24              | 0.24   | 0.32     |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.68   | 7.05              | 7.32   | 9.67     |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.45   | 0.87              | 0.90   | 1.19     |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.23              | 0.23   | 0.31     |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 480.29 | 913.55            | 958.09 | 1,237.94 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.43   | 0.82              | 0.85   | 1.12     |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.19              | 0.20   | 0.27     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.77   | 5.27              | 5.51   | 7.17   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.91   | 5.54              | 5.79   | 7.54   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.09   | 5.90              | 6.17   | 8.04   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.69   | 3.23              | 3.35   | 4.43   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.21   | 2.32              | 2.41   | 3.19   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 13.23  | 25.21             | 26.37  | 34.25  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.18              | 0.18   | 0.24   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.17              | 0.18   | 0.23   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.53   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.19              | 0.20   | 0.26   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.33              | 0.34   | 0.45   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.19   | 0.36              | 0.38   | 0.50   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.15              | 0.16   | 0.21   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.88   | 3.61              | 3.75   | 4.95   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.28              | 0.29   | 0.38   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.28              | 0.29   | 0.38   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.88   | 1.68              | 1.74   | 2.30   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.16              | 0.16   | 0.21   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.57   | 1.09              | 1.13   | 1.49   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 28.05  | 53.58             | 55.86  | 73.09  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 11.40  | 21.82             | 22.70  | 29.84  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 28.13  | 53.74             | 56.03  | 73.31  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 28.09  | 53.66             | 55.95  | 73.19  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 28.05  | 53.58             | 55.86  | 73.09  |
| NJ portion of the Northeast<br>Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Nogales, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.13   |
| Norfolk-Virginia Beach-Newport News (Hampton)   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.64   | 3.14              | 3.26   | 4.31   |
| Oakridge, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Ogden Area, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Olmsted County; (part), MN  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Olmsted; City of Rochester, MN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.20              | 0.20   | 0.27   |
| Parkersburg-Marietta, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.53   |
| Parkersburg-Marietta, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.10   | 0.19              | 0.20   | 0.26   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                          | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Penns Grove Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.16              | 0.17   | 0.22   |
| Perth Amboy Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.61   | 18.28             | 19.16  | 24.77  |
| Philadelphia-Camden County Area, PA-NJ  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 19.74  | 37.57             | 39.38  | 50.94  |
| Philadelphia-Wilmington, PA-NJ-DE   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 203.57 | 387.26            | 406.06 | 524.90 |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 203.57 | 387.26            | 406.06 | 524.90 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 206.23 | 392.37            | 411.36 | 531.90 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 205.77 | 391.48            | 410.43 | 530.68 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.52   | 6.75              | 7.01   | 9.25   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.70   | 7.08              | 7.35   | 9.71   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.69   | 7.08              | 7.35   | 9.70   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.41   | 0.79              | 0.82   | 1.09   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.36              | 0.37   | 0.49   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 7.66   | 14.60             | 15.27  | 19.84  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.66   | 14.60             | 15.27  | 19.84  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.48   | 14.25             | 14.91  | 19.37  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.48   | 14.25             | 14.91  | 19.37  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.21   | 2.32              | 2.41   | 3.18   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.75   | 1.43              | 1.49   | 1.97   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.99   | 1.89              | 1.97   | 2.60   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.18              | 0.19   | 0.25   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.97   | 1.85              | 1.92   | 2.54   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.19   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.40   | 0.77              | 0.80   | 1.05   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.39   | 2.67              | 2.77   | 3.66   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.36   | 4.51              | 4.69   | 6.19   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.44   | 0.84              | 0.88   | 1.16   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.44   | 0.84              | 0.88   | 1.16   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.44   | 0.84              | 0.88   | 1.16   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.33   | 0.63              | 0.65   | 0.86   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.42   | 2.72              | 2.82   | 3.72   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.44   | 0.85              | 0.88   | 1.17   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.44   | 0.85              | 0.88   | 1.17   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.52   | 1.00              | 1.03   | 1.36   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 102.67 | 195.52            | 204.74 | 265.40 |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.29   | 2.48              | 2.57   | 3.40   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.59              | 0.61   | 0.81   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.20              | 0.20   | 0.27   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.05              | 0.05   | 0.06   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.33   | 2.55              | 2.65   | 3.49   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.25   | 2.39              | 2.48   | 3.27   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 94.54  | 179.87            | 188.59 | 243.80 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 94.54  | 179.87            | 188.59 | 243.81 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 94.51  | 179.80            | 188.52 | 243.71 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.25   | 0.49              | 0.50   | 0.67   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 63.82  | 121.39            | 127.31 | 164.50 |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 75.86  | 144.31            | 151.31 | 195.60 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 64.61  | 122.91            | 128.88 | 166.58 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 64.61  | 122.91            | 128.88 | 166.58 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.58   | 1.11              | 1.15   | 1.52   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.37   | 6.47              | 6.71   | 8.86   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.38   | 6.48              | 6.73   | 8.88   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.38   | 6.47              | 6.72   | 8.87   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 133.68 | 254.37            | 266.64 | 344.89 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 133.65 | 254.31            | 266.57 | 344.81 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 133.68 | 254.37            | 266.64 | 344.89 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 133.12 | 253.28            | 265.51 | 343.40 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 12.42  | 23.69             | 24.75  | 32.23  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12.42  | 23.69             | 24.75  | 32.23  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12.42  | 23.69             | 24.75  | 32.23  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.42  | 23.69             | 24.75  | 32.23  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.42  | 23.69             | 24.75  | 32.23  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.71   | 5.16              | 5.41   | 6.99   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.13   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.92   | 1.77              | 1.84   | 2.43   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.49              | 0.51   | 0.67   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.77   | 5.31              | 5.51   | 7.27   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.44   | 0.85              | 0.89   | 1.17   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.33   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.33   |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.09   | 0.11   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.50   | 0.96              | 0.99   | 1.31   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.29   | 0.55              | 0.58   | 0.76   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.30   | 0.57              | 0.59   | 0.78   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.07   | 2.05              | 2.12   | 2.81   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.17   | 0.32              | 0.33   | 0.44   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 16.41  | 31.21             | 32.73  | 42.29  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.87   | 1.67              | 1.74   | 2.30   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 94.16  | 179.14            | 187.82 | 242.84 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 94.14  | 179.10            | 187.77 | 242.78 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 94.14  | 179.10            | 187.77 | 242.78 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.22   | 0.41              | 0.43   | 0.57   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.52   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.52   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.38              | 0.40   | 0.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.38   | 0.73              | 0.76   | 1.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.86   | 1.64              | 1.72   | 2.23   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.55   | 1.05              | 1.09   | 1.44   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.26              | 0.27   | 0.36   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.10   | 0.13   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.19              | 0.20   | 0.26   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.14              | 0.14   | 0.19   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.29  | 89.97             | 94.34  | 121.94 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.17              | 0.18   | 0.23   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.85   | 1.63              | 1.70   | 2.24   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.09   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.06              | 0.07   | 0.09   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.40   | 0.77              | 0.80   | 1.05   |



**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.52              | 0.54   | 0.71     |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 88.44  | 168.22            | 176.41 | 227.98   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.03   | 1.96              | 2.04   | 2.68     |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.07     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.26              | 0.27   | 0.36     |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15     |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 78.29  | 148.91            | 156.17 | 201.78   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 78.30  | 148.93            | 156.19 | 201.82   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 78.30  | 148.94            | 156.20 | 201.83   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.66   | 1.27              | 1.32   | 1.74     |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.89   | 9.36              | 9.72   | 12.84    |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.88   | 9.35              | 9.70   | 12.81    |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.80   | 9.20              | 9.55   | 12.61    |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.32   | 0.62              | 0.64   | 0.85     |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.25     |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.93   | 13.18             | 13.82  | 17.87    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.16              | 0.17   | 0.23     |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 480.51 | 913.98            | 958.53 | 1,238.53 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 480.51 | 913.98            | 958.53 | 1,238.53 |

**Table A-7. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.37   | 0.71              | 0.74   | 0.98   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.23   | 0.45              | 0.46   | 0.61   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.22              | 0.23   | 0.30   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.48   | 0.92              | 0.96   | 1.27   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.37   | 0.71              | 0.74   | 0.98   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.92   | 1.77              | 1.84   | 2.43   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.19   | 0.37              | 0.38   | 0.50   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.31              | 0.33   | 0.43   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.88              | 0.88   | 1.15   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.13   | 4.23              | 4.24   | 5.52   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.80   | 3.58              | 3.59   | 4.68   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.95   | 1.89              | 1.90   | 2.47   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.62              | 0.63   | 0.81   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.25              | 0.25   | 0.33   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.78   | 1.56              | 1.56   | 2.04   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.98   | 1.94              | 1.94   | 2.54   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.98   | 1.94              | 1.94   | 2.54   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.37              | 0.38   | 0.49   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.37              | 0.37   | 0.48   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.15   | 0.30              | 0.30   | 0.39   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.19              | 0.19   | 0.24   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.36   | 0.71              | 0.71   | 0.93   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.92  | 35.36             | 35.66  | 45.92  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.31              | 0.31   | 0.40   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.56              | 0.56   | 0.73   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.18              | 0.18   | 0.24   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.86   | 1.72              | 1.72   | 2.24   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.88   | 1.74              | 1.75   | 2.28   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.07              | 0.07   | 0.09   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.05              | 0.05   | 0.06   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.52   | 18.91             | 18.95  | 24.71  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.69   | 17.25             | 17.29  | 22.55  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.53   | 18.93             | 18.97  | 24.73  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.53  | 22.73             | 22.95  | 29.47  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.23   | 8.41              | 8.42   | 10.98  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.17   | 8.28              | 8.30   | 10.82  |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.23     | 8.41              | 8.42     | 10.98    |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 68.25    | 134.41            | 135.80   | 174.25   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.25    | 134.41            | 135.80   | 174.25   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,024.15 | 2,016.72          | 2,037.83 | 2,614.10 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02     | 0.04              | 0.04     | 0.06     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06     | 0.13              | 0.13     | 0.17     |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43     | 0.85              | 0.85     | 1.11     |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04     | 0.07              | 0.07     | 0.09     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 103.52   | 203.84            | 205.97   | 264.22   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 103.40   | 203.61            | 205.74   | 263.92   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.89     | 3.75              | 3.76     | 4.90     |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.89     | 3.75              | 3.76     | 4.90     |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.89     | 3.75              | 3.76     | 4.90     |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.44     | 0.88              | 0.88     | 1.15     |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02     | 0.03              | 0.03     | 0.05     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 3.66     | 7.23              | 7.28     | 9.39     |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 10.32    | 20.45             | 20.54    | 26.66    |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 1.09     | 2.17              | 2.17     | 2.83     |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.70    | 21.08             | 21.30    | 27.32    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.44     | 2.86              | 2.87     | 3.74     |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01     | 0.02              | 0.02     | 0.02     |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.22   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.14   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.19  | 20.08             | 20.28  | 26.04  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.19  | 20.08             | 20.28  | 26.04  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.19  | 20.08             | 20.28  | 26.04  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.16              | 0.16   | 0.21   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.31   | 0.61              | 0.61   | 0.80   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 1.03              | 1.03   | 1.34   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.52   | 1.03              | 1.03   | 1.34   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.52   | 1.03              | 1.03   | 1.34   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.79   | 3.55              | 3.55   | 4.63   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.71   | 7.36              | 7.38   | 9.62   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.60   | 7.15              | 7.16   | 9.34   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.85   | 1.69              | 1.69   | 2.20   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 221.19 | 435.71            | 440.12 | 564.97 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 221.19 | 435.71            | 440.12 | 564.97 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 221.37 | 436.07            | 440.48 | 565.44 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.28   | 0.55              | 0.55   | 0.72   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.14   | 0.28              | 0.28   | 0.36   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.28   | 0.55              | 0.55   | 0.72   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.28   | 0.55              | 0.55   | 0.72   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.11   | 10.12             | 10.18  | 13.19  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.15   | 10.19             | 10.24  | 13.28  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.00   | 9.90              | 9.95   | 12.90  |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.23   | 4.43              | 4.44   | 5.79   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43   | 0.86              | 0.86   | 1.12   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.37   | 0.73              | 0.74   | 0.96   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.38   | 14.56             | 14.69  | 18.91  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.23  | 20.22             | 20.36  | 26.29  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.23  | 20.21             | 20.35  | 26.28  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.89   | 19.54             | 19.68  | 25.41  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 9.86   | 19.48             | 19.62  | 25.33  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.76   | 1.51              | 1.52   | 1.98   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.08   | 6.11              | 6.12   | 7.98   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.08   | 6.11              | 6.12   | 7.98   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.79   | 5.53              | 5.55   | 7.23   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.20              | 0.20   | 0.26   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.20              | 0.20   | 0.26   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.02   | 13.84             | 13.97  | 17.96  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.38   | 14.55             | 14.68  | 18.89  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 15.58  | 30.86             | 31.01  | 40.22  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 15.79  | 31.29             | 31.44  | 40.78  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.88   | 3.73              | 3.74   | 4.87   |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.64   | 3.26              | 3.27   | 4.25   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.94  | 33.42             | 33.72  | 43.40  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 18.16  | 35.84             | 36.13  | 46.55  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 18.16  | 35.84             | 36.13  | 46.55  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.18  | 22.04             | 22.24  | 28.61  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.91   | 19.52             | 19.72  | 25.32  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 16.51  | 32.63             | 32.85  | 42.44  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.36  | 32.33             | 32.56  | 42.06  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.36  | 32.33             | 32.56  | 42.06  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.19   | 0.37              | 0.37   | 0.48   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 44.21  | 87.06             | 87.97  | 112.85 |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 10.85  | 21.37             | 21.59  | 27.70  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.39   | 12.59             | 12.71  | 16.33  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.83   | 11.48             | 11.60  | 14.88  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.35   | 0.69              | 0.69   | 0.90   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.67              | 0.67   | 0.87   |



**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.41   | 0.82              | 0.82   | 1.07   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.54   | 1.07              | 1.07   | 1.40   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.59   | 1.16              | 1.18   | 1.51   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.63   | 1.23              | 1.25   | 1.60   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.11              | 0.11   | 0.14   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.97   | 1.92              | 1.92   | 2.51   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.16   | 0.33              | 0.33   | 0.43   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.64   | 1.27              | 1.28   | 1.66   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.30   | 0.59              | 0.59   | 0.77   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.65   | 1.30              | 1.30   | 1.69   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.79   | 1.57              | 1.57   | 2.05   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.32   | 2.62              | 2.62   | 3.42   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.58   | 1.14              | 1.15   | 1.47   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 2.38   | 4.72              | 4.73   | 6.17   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 2.38   | 4.72              | 4.73   | 6.17   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.66   | 1.31              | 1.31   | 1.71   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.18              | 0.18   | 0.23   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.69   | 3.36              | 3.36   | 4.39   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.16   | 2.31              | 2.32   | 3.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.23              | 0.24   | 0.30   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.24              | 0.24   | 0.31   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.16   | 0.32              | 0.32   | 0.42   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.37   | 2.72              | 2.73   | 3.56   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.29   | 2.56              | 2.56   | 3.34   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.80   | 3.58              | 3.59   | 4.67   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.59   | 3.16              | 3.17   | 4.13   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.33   | 0.65              | 0.66   | 0.86   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 229.64 | 452.33            | 456.94 | 586.48 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 229.64 | 452.32            | 456.93 | 586.47 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.15              | 0.15   | 0.19   |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.99  | 21.65             | 21.87  | 28.06  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 11.23  | 22.12             | 22.34  | 28.68  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.59              | 0.59   | 0.77   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.72              | 0.72   | 0.94   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.72              | 0.72   | 0.94   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.36   | 0.72              | 0.72   | 0.94   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 10.85  | 21.36             | 21.59  | 27.69  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.13   | 0.26              | 0.26   | 0.34   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.56   | 7.07              | 7.08   | 9.23   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.74   | 5.45              | 5.46   | 7.12   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.65   | 1.29              | 1.29   | 1.68   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.03              | 0.03   | 0.04   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.15   | 0.29              | 0.29   | 0.38   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.55              | 0.55   | 0.72   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.27   | 0.55              | 0.55   | 0.71   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.27   | 0.55              | 0.55   | 0.71   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.15              | 0.15   | 0.19   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.21   | 0.42              | 0.42   | 0.55   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.18              | 0.18   | 0.24   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.16   | 0.32              | 0.32   | 0.42   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.34              | 0.34   | 0.45   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.34              | 0.34   | 0.45   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.97              | 1.98   | 2.58   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.64   | 5.24              | 5.25   | 6.85   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.20   | 0.40              | 0.40   | 0.53   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.92  | 21.50             | 21.72  | 27.87  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.92  | 21.50             | 21.72  | 27.87  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.07              | 0.07   | 0.09   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.25              | 0.25   | 0.33   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.13   | 0.25              | 0.25   | 0.33   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.27              | 0.27   | 0.35   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.76   | 3.50              | 3.51   | 4.57   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.07   | 2.13              | 2.13   | 2.78   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.40   | 2.78              | 2.79   | 3.63   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.40   | 2.78              | 2.79   | 3.63   |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.31   | 0.62              | 0.62   | 0.81   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.25   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.38   | 0.76              | 0.76   | 0.99   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 44.60  | 87.84             | 88.75  | 113.87 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 44.39  | 87.42             | 88.33  | 113.32 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.73   | 1.46              | 1.46   | 1.90   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.73   | 1.46              | 1.46   | 1.90   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.73   | 1.46              | 1.46   | 1.90   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.73   | 1.46              | 1.46   | 1.90   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.67              | 0.67   | 0.87   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.91   | 1.80              | 1.81   | 2.35   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.22   | 4.42              | 4.43   | 5.77   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.25   | 4.46              | 4.47   | 5.83   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 103.40 | 203.62            | 205.75 | 263.93 |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 167.87 | 330.56            | 334.02 | 428.48 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.93  | 41.21             | 41.64  | 53.43  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.26              | 0.26   | 0.34   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.22              | 0.22   | 0.29   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.11              | 0.11   | 0.14   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 140.55 | 277.12            | 279.68 | 359.65 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 120.54 | 237.38            | 239.84 | 307.72 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 120.54 | 237.38            | 239.84 | 307.72 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 140.57 | 277.16            | 279.72 | 359.70 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 140.56 | 277.16            | 279.71 | 359.70 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 140.56 | 277.15            | 279.71 | 359.69 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 140.56 | 277.16            | 279.71 | 359.69 |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 140.55 | 277.12            | 279.68   | 359.65   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.78   | 3.53              | 3.53     | 4.61     |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.71   | 3.40              | 3.41     | 4.45     |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.30              | 0.30     | 0.39     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 63.97  | 125.98            | 127.29   | 163.31   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.67              | 0.67     | 0.87     |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.34   | 0.67              | 0.67     | 0.87     |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 124.55 | 245.25            | 247.82   | 317.90   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.23              | 0.23     | 0.30     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.34              | 0.34     | 0.44     |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 5.09   | 10.12             | 10.14    | 13.22    |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.62   | 1.22              | 1.23     | 1.60     |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.32              | 0.32     | 0.42     |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.13              | 0.13     | 0.16     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 655.33 | 1,290.43          | 1,303.95 | 1,672.67 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.59   | 1.18              | 1.18     | 1.54     |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.10              | 0.10     | 0.13     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.15   | 0.29              | 0.29     | 0.38     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.79   | 7.49              | 7.55   | 9.73   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.99   | 7.87              | 7.93   | 10.24  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.25   | 8.40              | 8.46   | 10.92  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.34   | 4.64              | 4.65   | 6.06   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.68   | 3.34              | 3.34   | 4.36   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.12  | 35.75             | 36.05  | 46.43  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.13   | 0.25              | 0.25   | 0.33   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.24              | 0.24   | 0.32   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.26   | 0.51              | 0.52   | 0.67   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.29              | 0.29   | 0.38   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.47              | 0.47   | 0.62   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.52              | 0.52   | 0.68   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.04   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.22              | 0.22   | 0.29   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.61   | 5.18              | 5.19   | 6.77   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.38              | 0.38   | 0.50   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.38              | 0.38   | 0.50   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.21   | 2.41              | 2.41   | 3.14   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.22              | 0.22   | 0.28   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.79   | 1.56              | 1.57   | 2.04   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 38.60  | 76.40             | 76.84  | 99.49  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 15.76  | 31.25             | 31.38  | 40.77  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 38.72  | 76.63             | 77.07  | 99.80  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 38.67  | 76.54             | 76.97  | 99.67  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 38.60  | 76.40             | 76.84  | 99.49  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.22              | 0.22   | 0.28   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.18   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.27   | 4.52              | 4.53   | 5.90   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.07              | 0.07   | 0.09   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.28              | 0.28   | 0.37   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.55              | 0.55   | 0.72   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.27              | 0.27   | 0.36   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.23              | 0.23   | 0.30   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.13  | 25.86             | 26.13  | 33.52  |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 26.96  | 53.11             | 53.64  | 68.86  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 277.84 | 547.21            | 552.85 | 709.42 |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 277.84 | 547.21            | 552.85 | 709.42 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 281.54 | 554.55            | 560.20 | 719.01 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 280.90 | 553.28            | 558.93 | 717.36 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.87   | 9.67              | 9.69   | 12.63  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.11   | 10.16             | 10.18  | 13.28  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.11   | 10.15             | 10.18  | 13.27  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.25   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 1.16              | 1.17   | 1.52   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.47              | 0.47   | 0.61   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 10.49  | 20.70             | 20.88  | 26.89  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 10.49  | 20.70             | 20.88  | 26.89  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.24  | 20.22             | 20.39  | 26.26  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.24  | 20.22             | 20.39  | 26.26  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.09              | 0.09   | 0.11   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.69   | 3.35              | 3.35   | 4.37   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 1.03   | 2.06              | 2.06   | 2.68   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.37   | 2.72              | 2.72   | 3.55   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.27              | 0.27   | 0.35   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.34   | 2.66              | 2.66   | 3.47   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.25   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.56   | 1.10              | 1.11   | 1.44   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.93   | 3.83              | 3.84   | 5.01   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.26   | 6.48              | 6.50   | 8.47   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.61   | 1.21              | 1.21   | 1.58   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.61   | 1.21              | 1.21   | 1.58   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.61   | 1.21              | 1.21   | 1.58   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.44   | 0.88              | 0.88   | 1.15   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.18   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.96   | 3.90              | 3.91   | 5.09   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.60   | 1.19              | 1.19   | 1.55   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.60   | 1.19              | 1.19   | 1.55   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.70   | 1.39              | 1.39   | 1.81   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 140.46 | 276.95            | 279.51 | 359.43 |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.79   | 3.56              | 3.56   | 4.65   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43   | 0.85              | 0.85   | 1.11   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.28              | 0.28   | 0.37   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.09              | 0.09   | 0.12   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.79   | 3.55              | 3.56   | 4.64   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.73   | 3.43              | 3.43   | 4.48   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 129.06 | 254.19            | 256.79 | 329.55 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 129.06 | 254.19            | 256.79 | 329.55 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 129.01 | 254.11            | 256.71 | 329.44 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.36   | 0.71              | 0.71   | 0.93   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 87.07  | 171.45            | 173.24 | 222.24 |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 103.54 | 203.92            | 206.02 | 264.37 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 88.17  | 173.65            | 175.45 | 225.12 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 88.17  | 173.65            | 175.45 | 225.12 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.74   | 1.47              | 1.47   | 1.92   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.67   | 9.28              | 9.30   | 12.13  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.68   | 9.30              | 9.32   | 12.15  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.68   | 9.29              | 9.31   | 12.14  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 182.55 | 359.63            | 363.24 | 466.34 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 182.50 | 359.53            | 363.15 | 466.22 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 182.55 | 359.63            | 363.24 | 466.34 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 181.76 | 358.05            | 361.66 | 464.28 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 17.06  | 33.71             | 33.96  | 43.82  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.06  | 33.71             | 33.96  | 43.82  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.06  | 33.71             | 33.96  | 43.82  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.06  | 33.70             | 33.96  | 43.82  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.06  | 33.70             | 33.96  | 43.82  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.70   | 7.29              | 7.36   | 9.45   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.04   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.18   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.28   | 2.54              | 2.55   | 3.32   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.36   | 0.71              | 0.71   | 0.92   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.83   | 7.61              | 7.63   | 9.94   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.61   | 1.21              | 1.21   | 1.58   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.35              | 0.35   | 0.46   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.18   | 0.35              | 0.35   | 0.46   |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts**  
**Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.15   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.69   | 1.37              | 1.38   | 1.80   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.39   | 0.78              | 0.78   | 1.02   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.81              | 0.81   | 1.06   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.48   | 2.94              | 2.94   | 3.84   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.24   | 0.48              | 0.48   | 0.63   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 22.39  | 44.09             | 44.55  | 57.14  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.18   | 2.35              | 2.36   | 3.07   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 128.53 | 253.17            | 255.76 | 328.25 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 128.50 | 253.11            | 255.69 | 328.16 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 128.50 | 253.11            | 255.69 | 328.16 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.30   | 0.59              | 0.59   | 0.77   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.25   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.27   | 0.54              | 0.55   | 0.71   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.27   | 0.54              | 0.55   | 0.71   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.54              | 0.55   | 0.71   |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.51   | 1.02              | 1.02   | 1.33   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.17   | 2.31              | 2.34   | 3.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.76   | 1.50              | 1.51   | 1.97   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.19   | 0.37              | 0.37   | 0.49   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.27              | 0.27   | 0.35   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.20              | 0.20   | 0.26   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 64.55  | 127.12            | 128.43 | 164.79 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.25              | 0.25   | 0.32   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.18   | 2.35              | 2.35   | 3.07   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 1.10              | 1.11   | 1.44   |



**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.37   | 0.74              | 0.75     | 0.97     |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 120.68 | 237.65            | 240.13   | 308.07   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.41   | 2.80              | 2.81     | 3.65     |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.37              | 0.37     | 0.49     |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01     | 0.01     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.15              | 0.15     | 0.20     |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 106.82 | 210.33            | 212.54   | 272.64   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 106.83 | 210.37            | 212.57   | 272.69   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 106.84 | 210.38            | 212.58   | 272.70   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.92   | 1.82              | 1.83     | 2.38     |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.77   | 13.44             | 13.47    | 17.56    |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.75   | 13.42             | 13.45    | 17.53    |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.65   | 13.21             | 13.24    | 17.26    |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.44   | 0.87              | 0.87     | 1.14     |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.28              | 0.28     | 0.36     |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.49   | 18.70             | 18.89    | 24.24    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.24              | 0.25     | 0.32     |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 655.63 | 1,291.04          | 1,304.56 | 1,673.47 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 655.63 | 1,291.04          | 1,304.56 | 1,673.47 |

**Table A-8. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.51   | 1.02              | 1.02   | 1.33   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.34   | 0.67              | 0.67   | 0.88   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.32              | 0.32   | 0.42   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.67   | 1.33              | 1.33   | 1.73   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.51   | 1.02              | 1.02   | 1.33   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.28   | 2.54              | 2.55   | 3.32   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.27   | 0.53              | 0.53   | 0.69   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.45              | 0.45   | 0.59   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.32              | 0.31   | 0.40   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.28   | 1.49              | 1.48   | 1.87   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.08   | 1.26              | 1.25   | 1.58   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.54   | 0.64              | 0.63   | 0.80   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.28   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.48   | 0.56              | 0.55   | 0.70   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.59   | 0.69              | 0.69   | 0.87   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.59   | 0.69              | 0.69   | 0.87   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.06   | 0.08   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.25              | 0.25   | 0.32   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.75   | 7.14              | 7.46   | 9.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.22   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.25   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.52   | 0.60              | 0.60   | 0.76   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.62              | 0.61   | 0.78   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.76   | 6.72              | 6.66   | 8.44   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.26   | 6.13              | 6.08   | 7.70   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.76   | 6.72              | 6.66   | 8.44   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.58   | 0.70              | 0.71   | 0.88   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.57   | 3.00              | 2.97   | 3.76   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.53   | 2.95              | 2.93   | 3.71   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.57   | 3.00              | 2.97   | 3.76   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.03   | 7.75              | 8.29   | 9.95   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.03   | 7.75              | 8.29   | 9.95   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 7.02   | 9.07              | 9.75   | 11.66  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.30              | 0.30   | 0.38   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.70   | 2.20              | 2.37   | 2.83   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.62   | 2.11              | 2.28   | 2.72   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.10   | 1.29              | 1.28   | 1.62   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.10   | 1.29              | 1.28   | 1.62   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.10   | 1.29              | 1.28   | 1.62   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.32              | 0.31   | 0.40   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.63   | 0.73              | 0.73   | 0.92   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.63   | 5.40              | 5.35   | 6.79   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.65   | 0.76              | 0.75   | 0.96   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.38   | 1.79              | 1.93   | 2.31   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.87   | 1.01              | 1.00   | 1.27   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.77   | 0.96              | 1.00   | 1.22   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.77   | 0.96              | 1.00   | 1.22   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.77   | 0.96              | 1.00   | 1.22   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.27   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.36              | 0.36   | 0.45   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.31   | 0.36              | 0.36   | 0.45   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.36              | 0.36   | 0.45   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.07   | 1.25              | 1.24   | 1.57   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.21   | 2.57              | 2.55   | 3.23   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.14   | 2.49              | 2.47   | 3.13   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.51   | 0.60              | 0.59   | 0.75   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 11.73  | 14.51             | 15.09  | 18.48  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.73  | 14.51             | 15.09  | 18.48  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.84  | 14.63             | 15.22  | 18.63  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.19              | 0.19   | 0.24   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.19              | 0.19   | 0.24   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.24   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.00   | 2.33              | 2.31   | 2.92   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.02   | 2.35              | 2.33   | 2.96   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.93   | 2.25              | 2.23   | 2.83   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.33   | 1.55              | 1.54   | 1.95   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.30              | 0.30   | 0.38   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.22   | 0.26              | 0.26   | 0.32   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.80   | 0.93              | 0.92   | 1.17   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.51   | 2.92              | 2.90   | 3.67   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.50   | 2.92              | 2.89   | 3.67   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.31   | 2.69              | 2.67   | 3.38   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.28   | 2.66              | 2.64   | 3.34   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.46   | 0.54              | 0.54   | 0.68   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.79   | 2.09              | 2.07   | 2.62   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.79   | 2.09              | 2.07   | 2.62   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 1.89              | 1.87   | 2.37   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.09   | 0.11   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.62   | 0.72              | 0.72   | 0.91   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 0.93              | 0.92   | 1.16   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6.49   | 7.58              | 7.53   | 9.53   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.62   | 7.73              | 7.68   | 9.72   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.07   | 1.25              | 1.24   | 1.57   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.93   | 1.09              | 1.08   | 1.37   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.24   | 3.93              | 4.02   | 4.98   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.92   | 4.72              | 4.81   | 5.98   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.92   | 4.72              | 4.81   | 5.98   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.64   | 1.94              | 1.95   | 2.45   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.43   | 0.53              | 0.55   | 0.67   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.50   | 5.27              | 5.25   | 6.63   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.41   | 5.17              | 5.15   | 6.51   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.41   | 5.17              | 5.15   | 6.51   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.63   | 3.42              | 3.69   | 4.40   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.24              | 0.25   | 0.31   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.00   | 1.25              | 1.31   | 1.60   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.64   | 0.83              | 0.90   | 1.07   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.21   | 0.24              | 0.24   | 0.31   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.27   |



**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.25   | 0.29              | 0.29   | 0.36   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.31   | 0.37              | 0.36   | 0.46   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.31              | 0.33   | 0.40   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.26   | 0.33              | 0.35   | 0.43   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.58   | 0.68              | 0.67   | 0.85   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.38   | 0.45              | 0.44   | 0.56   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.18   | 0.21              | 0.21   | 0.26   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.39   | 0.46              | 0.45   | 0.57   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.48   | 0.56              | 0.56   | 0.71   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.79   | 0.92              | 0.91   | 1.16   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.30   | 0.39              | 0.42   | 0.50   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.43   | 1.67              | 1.66   | 2.10   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.43   | 1.67              | 1.65   | 2.10   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.35   | 0.41              | 0.40   | 0.51   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.01   | 1.18              | 1.17   | 1.49   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.70   | 0.82              | 0.81   | 1.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.11              | 0.11   | 0.14   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.83   | 0.96              | 0.96   | 1.21   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.78   | 0.91              | 0.90   | 1.14   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.08   | 1.26              | 1.25   | 1.59   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.95   | 1.11              | 1.10   | 1.39   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.29   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 17.18  | 21.70             | 22.95  | 27.77  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.17  | 21.69             | 22.95  | 27.76  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.55   | 1.99              | 2.13   | 2.55   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.69   | 2.16              | 2.30   | 2.77   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.26   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.25              | 0.25   | 0.32   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.25              | 0.25   | 0.32   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.21   | 0.25              | 0.25   | 0.31   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.24              | 0.25   | 0.31   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.14   | 2.49              | 2.47   | 3.13   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.65   | 1.92              | 1.90   | 2.41   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.42   | 0.49              | 0.49   | 0.62   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.17   | 0.19              | 0.19   | 0.24   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.19              | 0.19   | 0.24   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.13   | 0.15              | 0.15   | 0.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.11              | 0.11   | 0.14   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.60   | 0.70              | 0.70   | 0.88   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 1.88              | 1.87   | 2.37   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.18   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.30              | 0.32   | 0.39   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.24   | 0.30              | 0.32   | 0.39   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.06   | 1.23              | 1.22   | 1.55   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.64   | 0.75              | 0.74   | 0.94   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.84   | 0.98              | 0.97   | 1.23   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.84   | 0.98              | 0.97   | 1.23   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.27   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.34   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.89   | 3.73              | 4.00   | 4.79   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.78   | 3.59              | 3.86   | 4.62   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.44   | 0.51              | 0.51   | 0.65   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.44   | 0.51              | 0.51   | 0.65   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.44   | 0.51              | 0.51   | 0.65   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.44   | 0.51              | 0.51   | 0.65   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.27   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.54   | 0.63              | 0.63   | 0.80   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.33   | 1.55              | 1.53   | 1.94   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.34   | 1.57              | 1.55   | 1.97   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.63   | 2.11              | 2.28   | 2.72   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.64   | 4.72              | 5.09   | 6.07   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.71   | 2.20              | 2.37   | 2.83   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.82  | 20.17             | 20.47  | 25.50  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.93   | 6.31              | 6.73   | 8.09   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.93   | 6.31              | 6.73   | 8.09   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.83  | 20.18             | 20.48  | 25.52  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 16.83  | 20.17             | 20.48  | 25.52  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.83  | 20.17             | 20.48  | 25.51  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.83  | 20.17             | 20.48  | 25.51  |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.82  | 20.17             | 20.47  | 25.50  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.07   | 1.24              | 1.23   | 1.56   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.03   | 1.20              | 1.19   | 1.51   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.04   | 3.92              | 4.21   | 5.04   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.23   | 0.30   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.23   | 0.30   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.89   | 5.06              | 5.46   | 6.51   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance,                                 | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.06   | 3.57              | 3.54   | 4.49   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.38   | 0.45              | 0.44   | 0.56   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.14   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.76   | 0.99              | 1.07   | 1.28   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.36   | 0.41              | 0.41   | 0.52   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.21   | 1.48              | 1.52   | 1.87   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.33   | 1.61              | 1.65   | 2.05   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.48   | 1.79              | 1.83   | 2.27   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.40   | 1.63              | 1.62   | 2.05   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.01   | 1.17              | 1.16   | 1.48   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.86   | 7.27              | 7.58   | 9.27   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.25   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.16   | 0.18              | 0.18   | 0.23   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.58   | 1.84              | 1.82   | 2.31   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.19   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.74   | 0.86              | 0.85   | 1.08   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.15   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.69   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.98  | 17.68             | 17.71  | 22.28  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 8.68   | 10.29             | 10.35  | 12.98  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 15.04  | 17.74             | 17.77  | 22.36  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 14.99  | 17.69             | 17.72  | 22.29  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 14.98  | 17.68             | 17.71  | 22.28  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.36   | 1.59              | 1.58   | 2.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.05   | 0.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.05   | 0.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.19              | 0.19   | 0.24   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.08   | 0.11   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.53              | 0.56   | 0.67   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.47   | 3.10              | 3.27   | 3.97   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.42   | 11.77             | 12.35  | 15.03  |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.42   | 11.77             | 12.35  | 15.03  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.63  | 14.34             | 14.90  | 18.26  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 11.24  | 13.89             | 14.44  | 17.69  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.94   | 3.42              | 3.39   | 4.30   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.08   | 3.59              | 3.56   | 4.51   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.08   | 3.58              | 3.55   | 4.50   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.38              | 0.38   | 0.48   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.25   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.67   | 1.95              | 1.94   | 2.45   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.67   | 1.95              | 1.94   | 2.45   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.52   | 1.78              | 1.76   | 2.23   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.52   | 1.78              | 1.76   | 2.23   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.99   | 1.16              | 1.15   | 1.46   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.63   | 0.74              | 0.74   | 0.93   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.82   | 0.96              | 0.95   | 1.20   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.81   | 0.95              | 0.94   | 1.20   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.49   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.16   | 1.35              | 1.34   | 1.70   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.96   | 2.28              | 2.26   | 2.86   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.37   | 0.43              | 0.42   | 0.54   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.37   | 0.43              | 0.42   | 0.54   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.37   | 0.43              | 0.42   | 0.54   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.28   | 0.33              | 0.32   | 0.41   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.18   | 1.37              | 1.36   | 1.72   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.39   | 0.46              | 0.45   | 0.57   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.39   | 0.46              | 0.45   | 0.57   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.46   | 0.53              | 0.53   | 0.67   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 16.76  | 20.10             | 20.40  | 25.42  |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.08   | 1.26              | 1.24   | 1.58   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.30              | 0.30   | 0.38   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.15   | 1.34              | 1.33   | 1.69   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.04   | 1.21              | 1.20   | 1.52   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.64   | 3.17              | 3.22   | 4.01   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.64   | 3.17              | 3.22   | 4.01   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.60   | 3.12              | 3.17   | 3.95   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.30   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.80   | 1.02              | 1.09   | 1.31   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.41   | 2.96              | 3.06   | 3.76   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.44   | 1.77              | 1.83   | 2.25   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.44   | 1.77              | 1.83   | 2.25   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.54   | 0.63              | 0.62   | 0.79   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.81   | 3.27              | 3.24   | 4.11   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.82   | 3.28              | 3.25   | 4.12   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.81   | 3.28              | 3.25   | 4.12   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.67   | 10.54             | 10.82  | 13.38  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.65   | 10.51             | 10.79  | 13.33  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.67   | 10.54             | 10.82  | 13.38  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 8.21   | 10.00             | 10.28  | 12.69  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.83   | 4.49              | 4.47   | 5.64   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.83   | 4.49              | 4.47   | 5.64   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.83   | 4.49              | 4.47   | 5.64   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.83   | 4.49              | 4.47   | 5.64   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.83   | 4.49              | 4.47   | 5.64   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.11   | 0.13   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.77   | 0.90              | 0.89   | 1.13   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.21   | 0.25              | 0.25   | 0.31   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.31   | 2.69              | 2.66   | 3.38   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.44              | 0.44   | 0.55   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.15   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.11   | 0.12              | 0.12   | 0.15   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.42   | 0.48              | 0.48   | 0.61   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.29              | 0.28   | 0.36   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.30              | 0.29   | 0.37   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.89   | 1.03              | 1.03   | 1.30   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.19   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.68   | 3.49              | 3.77   | 4.49   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.75   | 0.87              | 0.86   | 1.09   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 6.32   | 7.90              | 8.28   | 10.08  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 6.30   | 7.87              | 8.26   | 10.05  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 6.30   | 7.87              | 8.26   | 10.05  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.18   | 0.21              | 0.21   | 0.26   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.19   | 0.23              | 0.24   | 0.29   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.19   | 0.23              | 0.24   | 0.29   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.23              | 0.24   | 0.29   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.37              | 0.37   | 0.46   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.67   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.36   | 4.30              | 4.58   | 5.51   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.71   | 0.82              | 0.82   | 1.04   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.49   |



**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.26              | 0.26   | 0.33   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.74   | 6.08              | 6.51   | 7.81   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.62   | 0.72              | 0.72   | 0.91   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.40              | 0.44   | 0.52   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.32   | 0.42              | 0.45   | 0.54   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.33   | 0.42              | 0.46   | 0.54   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.55   | 0.64              | 0.64   | 0.81   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.06   | 4.73              | 4.69   | 5.95   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.05   | 4.73              | 4.68   | 5.94   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.99   | 4.65              | 4.61   | 5.85   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.28   | 0.32              | 0.32   | 0.41   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.33              | 0.35   | 0.42   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.95   | 1.21              | 1.29   | 1.55   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.95   | 1.21              | 1.29   | 1.55   |

**Table A-9. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.31   | 0.36              | 0.36   | 0.45   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.27   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.14   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.40   | 0.47              | 0.46   | 0.59   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.31   | 0.36              | 0.36   | 0.45   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.77   | 0.90              | 0.89   | 1.13   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.18              | 0.18   | 0.23   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.20   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 54.56  | 78.66             | 80.03  | 104.11   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 263.79 | 380.12            | 386.43 | 502.62   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 223.37 | 321.88            | 327.22 | 425.61   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 109.60 | 157.98            | 160.72 | 209.09   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 38.92  | 56.09             | 57.02  | 74.16    |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.15  | 18.95             | 19.28  | 25.08    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.81   | 2.61              | 2.65   | 3.45     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.37  | 17.83             | 18.13  | 23.59    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 97.34  | 140.29            | 142.68 | 185.61   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 121.12 | 174.57            | 177.53 | 230.93   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 121.12 | 174.57            | 177.53 | 230.93   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 23.30  | 33.58             | 34.15  | 44.42    |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 22.80  | 32.86             | 33.40  | 43.44    |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 18.52  | 26.70             | 27.16  | 35.34    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.12   | 1.62              | 1.65   | 2.15     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.59  | 16.71             | 16.98  | 22.09    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 44.45  | 64.07             | 65.16  | 84.76    |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 585.44 | 855.25            | 895.57 | 1,174.36 |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.18     | 6.46              | 7.57     | 10.21    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.08    | 50.54             | 51.38    | 66.83    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.25    | 16.21             | 16.48    | 21.44    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 106.90   | 154.04            | 156.60   | 203.69   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 108.83   | 156.85            | 159.48   | 207.44   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.10     | 5.91              | 6.01     | 7.81     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.74     | 1.06              | 1.08     | 1.40     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.47     | 3.55              | 3.61     | 4.70     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,181.16 | 1,702.21          | 1,730.77 | 2,251.29 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,077.76 | 1,553.20          | 1,579.30 | 2,054.27 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,182.11 | 1,703.56          | 1,732.15 | 2,253.09 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.45     | 13.62             | 13.85    | 18.01    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 91.19    | 131.96            | 135.39   | 176.56   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.98     | 2.86              | 2.91     | 3.79     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 524.95   | 756.55            | 769.33   | 1,000.73 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 517.00   | 745.10            | 757.68   | 985.58   |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |          |          |
|--|-------------------------------------|--|---|--|--------|--------------------|----------|----------|
|  |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 524.95 | 756.55             | 769.33   | 1,000.73 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 275.79 | 416.18             | 465.26   | 620.49   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 275.79 | 416.18             | 465.26   | 620.49   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 248.59 | 381.45             | 440.00   | 591.28   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.53   | 3.65               | 3.71     | 4.82     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.05   | 11.60              | 11.80    | 15.34    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 53.08  | 76.49              | 77.76    | 101.14   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.53   | 6.53               | 6.64     | 8.64     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 50.62  | 78.73              | 93.06    | 125.78   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 35.85  | 57.45              | 71.42    | 97.63    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 222.61 | 320.88             | 326.43   | 424.66   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 223.00 | 321.45             | 327.00   | 425.40   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 223.00 | 321.45             | 327.00   | 425.40   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 54.56  | 78.66              | 80.03    | 104.11   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.82   | 2.63               | 2.67     | 3.47     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 128.78 | 185.61             | 188.77   | 245.55   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 955.31 | 1,376.64           | 1,399.55 | 1,820.39 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 135.00 | 194.53             | 197.76   | 257.22   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.86  | 49.37              | 61.20    | 83.61    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.18               | 0.19     | 0.24     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 178.76 | 257.60             | 261.88   | 340.62   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.49   | 2.15               | 2.18     | 2.84     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.63    | 15.31             | 15.57    | 20.25    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.24     | 8.98              | 9.13     | 11.88    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 77.02    | 112.58            | 118.03   | 154.81   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 77.02    | 112.58            | 118.03   | 154.81   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 77.02    | 112.58            | 118.03   | 154.81   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.95     | 14.34             | 14.57    | 18.96    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 37.99    | 54.75             | 55.65    | 72.39    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.85     | 4.11              | 4.17     | 5.43     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 64.03    | 92.27             | 93.80    | 122.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 64.03    | 92.27             | 93.80    | 122.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 64.03    | 92.27             | 93.80    | 122.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 221.28   | 318.87            | 324.16   | 421.63   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 457.00   | 658.54            | 669.46   | 870.76   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 442.61   | 637.80            | 648.38   | 843.34   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 105.01   | 151.34            | 153.89   | 200.18   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,291.47 | 1,882.91          | 1,963.34 | 2,571.56 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,291.47 | 1,882.91          | 1,963.34 | 2,571.56 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,313.63 | 1,914.84          | 1,995.80 | 2,613.78 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.32    | 49.45             | 50.27    | 65.38    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.92    | 21.50             | 21.86    | 28.43    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.32    | 49.45             | 50.27    | 65.38    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 33.88    | 48.82             | 49.63    | 64.55    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 410.28   | 591.25            | 601.14   | 781.92   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 414.85   | 597.84            | 607.84   | 790.64   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 396.71   | 571.69            | 581.26   | 756.06   |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 275.18   | 396.54            | 403.12   | 524.33   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 53.51    | 77.10             | 78.38    | 101.95   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 45.81    | 66.02             | 67.11    | 87.29    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 164.90   | 237.62            | 241.56   | 314.20   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 517.79   | 746.13            | 758.51   | 986.58   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 517.29   | 745.42            | 757.79   | 985.64   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 476.38   | 686.46            | 697.85   | 907.68   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 471.63   | 679.62            | 690.90   | 898.63   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.18     | 10.34             | 10.51    | 13.67    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 94.08    | 135.61            | 137.96   | 179.47   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 367.10   | 529.04            | 537.92   | 699.70   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 367.10   | 529.04            | 537.92   | 699.70   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 331.43   | 477.64            | 485.66   | 631.73   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.69    | 18.32             | 18.71    | 24.37    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.48    | 22.35             | 22.81    | 29.70    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13     | 0.18              | 0.19     | 0.24     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 126.75   | 182.65            | 185.68   | 241.51   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 164.24   | 236.67            | 240.59   | 312.94   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,313.02 | 1,892.58          | 1,925.12 | 2,504.37 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,339.89 | 1,931.30          | 1,964.48 | 2,555.57 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 221.14   | 318.67            | 323.99   | 421.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 191.59 | 276.09            | 280.71   | 365.12   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 466.07 | 675.54            | 695.60   | 907.97   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 602.48 | 872.19            | 895.67   | 1,168.26 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 602.48 | 872.19            | 895.67   | 1,168.26 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 290.31 | 419.06            | 427.64   | 556.81   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 54.91  | 79.85             | 82.79    | 108.27   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 891.89 | 1,285.94          | 1,308.92 | 1,703.07 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 873.58 | 1,259.56          | 1,282.09 | 1,668.19 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 873.58 | 1,259.56          | 1,282.09 | 1,668.19 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.84   | 2.65              | 2.70     | 3.51     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.64   | 8.13              | 8.26     | 10.75    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.02   | 8.67              | 8.82     | 11.47    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.10   | 3.02              | 3.07     | 4.00     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.23  | 27.71             | 28.17    | 36.64    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 60.33  | 96.26             | 118.82   | 162.17   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06     | 0.08     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 8.97   | 13.48             | 14.95    | 19.90    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 89.48  | 131.18            | 138.39   | 181.83   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.60  | 27.57             | 33.01    | 44.75    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 43.08  | 62.08             | 63.11    | 82.09    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.53   | 0.76              | 0.77     | 1.00     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 39.27  | 56.59             | 57.53    | 74.83    |



**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 51.09  | 73.62             | 74.84  | 97.34  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 65.09  | 93.79             | 95.34  | 124.01 |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 7.67   | 11.85             | 13.85  | 18.67  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 11.69  | 17.64             | 19.74  | 26.33  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.45              | 0.45   | 0.59   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 6.40   | 9.22              | 9.37   | 12.19  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.81   | 1.17              | 1.19   | 1.55   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 119.77 | 172.59            | 175.45 | 228.20 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 20.83  | 30.02             | 30.51  | 39.69  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 79.44  | 114.47            | 116.37 | 151.35 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 36.67  | 52.84             | 53.72  | 69.87  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 80.95  | 116.66            | 118.59 | 154.25 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.14   | 5.97              | 6.07   | 7.89   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 6.93   | 9.98              | 10.15  | 13.20  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 97.37  | 140.34            | 142.72 | 185.66 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 163.03 | 234.93            | 238.83 | 310.64 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.48   | 10.77             | 10.95  | 14.24  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.54   | 10.47             | 13.02  | 17.80  |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 295.76 | 426.20            | 433.27 | 563.54 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 295.54 | 425.87            | 432.93 | 563.11 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 67.58  | 97.46             | 99.24  | 129.13 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.60     | 10.96             | 11.15    | 14.51    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.16    | 16.08             | 16.34    | 21.26    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 209.42   | 301.77            | 306.78   | 399.02   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 144.39   | 208.07            | 211.52   | 275.12   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.91     | 5.95              | 6.75     | 9.03     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.97     | 6.03              | 6.82     | 9.13     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 20.07    | 28.91             | 29.39    | 38.23    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 170.12   | 245.16            | 249.26   | 324.21   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 159.63   | 230.04            | 233.89   | 304.22   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 223.36   | 321.87            | 327.24   | 425.64   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 196.58   | 283.27            | 287.97   | 374.56   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.63     | 0.91              | 0.93     | 1.21     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.45     | 0.65              | 0.66     | 0.85     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.45     | 0.65              | 0.66     | 0.85     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 40.87    | 58.89             | 59.86    | 77.86    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.59     | 3.73              | 3.80     | 4.94     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,261.02 | 1,861.34          | 1,991.57 | 2,626.52 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,260.38 | 1,860.42          | 1,990.64 | 2,625.31 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.07     | 13.07             | 13.29    | 17.28    |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 65.96  | 99.95             | 112.62 | 150.49 |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 95.81  | 142.96            | 156.34 | 207.36 |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.14   | 8.84              | 8.99   | 11.69  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 36.37  | 52.41             | 53.28  | 69.30  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 44.76  | 64.50             | 65.57  | 85.29  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 44.76  | 64.50             | 65.57  | 85.29  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 44.38  | 63.95             | 65.01  | 84.56  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.84   | 13.30             | 14.76  | 19.65  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 16.27  | 23.44             | 23.83  | 30.99  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.57   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 441.02 | 635.51            | 646.05 | 840.30 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 340.31 | 490.39            | 498.52 | 648.42 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 85.05  | 122.56            | 124.60 | 162.06 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.36   | 1.96              | 1.99   | 2.59   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 18.10  | 26.08             | 26.51  | 34.49  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.31   | 13.42             | 13.65  | 17.75  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 32.45  | 46.76             | 47.53  | 61.83  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 34.22  | 49.31             | 50.13  | 65.20  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 34.22  | 49.31             | 50.13  | 65.20  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.08   | 13.09             | 13.31  | 17.31  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 26.28  | 37.87             | 38.49  | 50.07  |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.35  | 14.91             | 15.16  | 19.72  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.85   | 1.23              | 1.25   | 1.63   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 19.92  | 28.70             | 29.18  | 37.95  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 21.76  | 31.35             | 31.87  | 41.45  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.76  | 31.35             | 31.87  | 41.45  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.48   | 10.77             | 10.95  | 14.24  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.50   | 2.15              | 2.19   | 2.85   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 123.31 | 177.71            | 180.69 | 235.03 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 327.09 | 471.45            | 479.53 | 623.80 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 25.10  | 36.17             | 36.77  | 47.83  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 19.57  | 28.75             | 30.47  | 40.09  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.57  | 28.75             | 30.47  | 40.09  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.14   | 5.96              | 6.06   | 7.88   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.69   | 5.32              | 5.41   | 7.04   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.59   | 2.28              | 2.32   | 3.02   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.63  | 16.75             | 17.03  | 22.15  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.51  | 16.59             | 16.87  | 21.94  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.62  | 18.18             | 18.48  | 24.04  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 218.48 | 314.84            | 320.06 | 416.30 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 132.66 | 191.16            | 194.33 | 252.76 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 173.61 | 250.17            | 254.32 | 330.79 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 173.61 | 250.17            | 254.32 | 330.79 |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 38.60  | 55.62             | 56.54  | 73.54  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.62  | 18.19             | 18.49  | 24.05  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.98   | 1.42              | 1.44   | 1.87   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 47.45  | 68.38             | 69.51  | 90.41  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 113.49 | 172.87            | 196.72 | 263.49 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.86   | 9.89              | 10.05  | 13.07  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 88.84  | 137.35            | 160.59 | 216.51 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.38   | 0.54              | 0.55   | 0.72   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.18   | 4.59              | 4.67   | 6.07   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.86   | 2.68              | 2.72   | 3.54   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 5.22   | 7.52              | 7.65   | 9.95   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 90.95  | 131.06            | 133.23 | 173.29 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 90.95  | 131.06            | 133.23 | 173.29 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 90.95  | 131.06            | 133.23 | 173.29 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 90.95  | 131.06            | 133.23 | 173.29 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.40   | 0.57              | 0.58   | 0.76   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 39.27  | 56.59             | 57.53  | 74.83  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 112.48 | 162.08            | 164.77 | 214.31 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 274.48   | 395.53            | 402.09   | 522.99   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 277.85   | 400.38            | 407.03   | 529.41   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.21     | 8.95              | 9.10     | 11.84    |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 36.02    | 57.70             | 71.68    | 97.97    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 102.86   | 160.77            | 191.64   | 259.52   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.15     | 3.09              | 3.14     | 4.09     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.81     | 2.61              | 2.65     | 3.45     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.81     | 2.61              | 2.65     | 3.45     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.82    | 94.70             | 108.91   | 146.25   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.07     | 1.54              | 1.56     | 2.03     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.06    | 23.14             | 23.53    | 30.60    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 13.04    | 18.79             | 19.10    | 24.84    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.96     | 11.47             | 11.66    | 15.17    |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,715.27 | 3,927.48          | 4,025.83 | 5,248.37 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 255.04   | 382.21            | 421.59   | 560.37   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 255.04   | 382.21            | 421.59   | 560.37   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,717.39 | 3,930.54          | 4,028.94 | 5,252.42 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2,717.12 | 3,930.16          | 4,028.55 | 5,251.91 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,716.74 | 3,929.60          | 4,027.98 | 5,251.17 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,716.98 | 3,929.94          | 4,028.34 | 5,251.63 |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,715.27 | 3,927.48          | 4,025.83 | 5,248.37 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 220.13   | 317.21            | 322.48   | 419.44   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 212.28   | 305.90            | 310.98   | 404.48   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 17.82    | 25.68             | 26.10    | 33.95    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 118.27   | 180.28            | 205.40   | 275.20   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 41.65    | 60.02             | 61.01    | 79.36    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 41.65    | 60.02             | 61.01    | 79.36    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24     | 0.34              | 0.35     | 0.45     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 92.99    | 147.73            | 181.04   | 246.70   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.36    | 22.13             | 22.50    | 29.26    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.03    | 30.30             | 30.80    | 40.06    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 632.28   | 911.11            | 926.23   | 1,204.72 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 78.48    | 113.08            | 114.96   | 149.52   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 20.21    | 29.13             | 29.61    | 38.52    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.86     | 11.33             | 11.52    | 14.98    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 18.86    | 29.86             | 36.40    | 49.54    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 73.42    | 105.79            | 107.55   | 139.88   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.23     | 8.98              | 9.13     | 11.87    |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 16.65    | 23.99             | 24.39    | 31.72    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 165.00 | 239.41            | 247.09 | 322.73   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 189.05 | 274.08            | 282.34 | 368.59   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 221.14 | 320.33            | 329.37 | 429.75   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.29   | 3.30              | 3.36   | 4.37     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.29   | 3.30              | 3.36   | 4.37     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.29   | 3.30              | 3.36   | 4.37     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 289.33 | 416.92            | 423.84 | 551.28   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 208.05 | 299.80            | 304.78 | 396.42   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 608.78 | 888.89            | 929.78 | 1,218.84 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.97  | 23.04             | 23.49  | 30.58    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.31  | 22.09             | 22.52  | 29.32    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 34.38  | 49.54             | 50.37  | 65.51    |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.36  | 23.57             | 23.96  | 31.16    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.59   | 6.61              | 6.72   | 8.75     |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.51              | 0.52   | 0.67     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.81   | 1.16              | 1.18   | 1.53     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.31   | 9.09              | 9.24   | 12.02    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.10   | 0.14              | 0.14   | 0.19     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.19     |



**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.87     | 9.91              | 10.07    | 13.11    |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.54    | 42.57             | 43.27    | 56.29    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.63     | 0.90              | 0.92     | 1.19     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.85     | 2.66              | 2.71     | 3.52     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.50     | 5.05              | 5.13     | 6.68     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 32.52    | 46.87             | 47.64    | 61.97    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.40     | 2.02              | 2.05     | 2.67     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.24    | 19.07             | 19.39    | 25.22    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 323.52   | 466.24            | 474.06   | 616.63   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.98     | 1.41              | 1.44     | 1.87     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 25.74    | 37.09             | 37.70    | 49.04    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.59    | 36.88             | 37.49    | 48.76    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.60     | 5.19              | 5.28     | 6.86     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 150.54   | 216.95            | 220.62   | 286.98   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.76     | 4.28              | 5.05     | 6.82     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 97.63    | 140.69            | 143.02   | 186.02   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,797.73 | 4,037.27          | 4,117.13 | 5,359.73 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,562.17 | 2,255.59          | 2,303.11 | 2,999.27 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,808.48 | 4,052.77          | 4,132.90 | 5,380.25 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,800.04 | 4,040.60          | 4,120.54 | 5,364.17 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,797.73 | 4,037.27          | 4,117.13 | 5,359.73 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 9.51     | 13.71             | 13.95    | 18.16    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.93     | 11.43             | 11.62    | 15.11    |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 281.16   | 405.17            | 411.92   | 535.79   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.40     | 0.57              | 0.58     | 0.76     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.67     | 13.94             | 14.17    | 18.43    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.67     | 13.94             | 14.17    | 18.43    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.94     | 7.13              | 7.24     | 9.42     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.77    | 25.60             | 26.03    | 33.85    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.33    | 49.47             | 50.29    | 65.41    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 17.13    | 24.69             | 25.10    | 32.64    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.95     | 10.01             | 10.18    | 13.24    |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19     | 0.27              | 0.27     | 0.35     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.91    | 21.48             | 21.84    | 28.41    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 24.80    | 36.92             | 40.22    | 53.28    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 198.93   | 292.66            | 310.99   | 409.41   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 868.12   | 1,271.80          | 1,339.74 | 1,759.61 |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 868.12   | 1,271.80          | 1,339.74 | 1,759.61 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,324.25 | 1,929.09          | 2,007.94 | 2,628.72 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,243.70 | 1,813.02          | 1,889.94 | 2,475.23 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 605.49   | 872.51            | 886.98   | 1,153.68 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 634.99   | 915.03            | 930.21   | 1,209.90 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 634.52   | 914.35            | 929.52   | 1,209.00 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.38     | 0.54              | 0.55     | 0.72     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12     | 0.17              | 0.18     | 0.23     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.69    | 15.41             | 15.66    | 20.37    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.73     | 6.81              | 6.93     | 9.01     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 69.54    | 100.21            | 101.87   | 132.50   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.37     | 6.30              | 6.40     | 8.33     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 33.91    | 48.87             | 49.69    | 64.64    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 340.56   | 490.85            | 499.20   | 649.37   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 340.56   | 490.85            | 499.20   | 649.37   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 309.63   | 446.27            | 453.88   | 590.43   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 309.63   | 446.27            | 453.88   | 590.43   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.36     | 7.73              | 7.85     | 10.22    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 201.53   | 290.49            | 295.50   | 384.42   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 127.44   | 183.70            | 186.89   | 243.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 169.66   | 244.48            | 248.53   | 323.26   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 15.77    | 22.72             | 23.10    | 30.05    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 165.85   | 239.04            | 243.11   | 316.25   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 12.67    | 18.26             | 18.57    | 24.15    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 68.81    | 99.16             | 100.81   | 131.12   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.09     | 4.45              | 4.52     | 5.88     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 239.15   | 344.62            | 350.34   | 455.68   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 403.98   | 582.14            | 591.79   | 769.73   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.48     | 0.70              | 0.71     | 0.93     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 75.57    | 108.90            | 110.71   | 144.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 75.57    | 108.90            | 110.71   | 144.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 75.57    | 108.90            | 110.71   | 144.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 57.06    | 82.22             | 83.58    | 108.72   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.20     | 8.94              | 9.09     | 11.82    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 243.23   | 350.49            | 356.31   | 463.44   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 78.50    | 113.12            | 115.00   | 149.58   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 78.50    | 113.12            | 115.00   | 149.58   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 91.69    | 132.13            | 134.32   | 174.71   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2,703.83 | 3,911.00          | 4,009.08 | 5,226.58 |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |          |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 221.74 | 319.54            | 324.87 | 422.56   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 52.96  | 76.31             | 77.58  | 100.90   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.63  | 25.41             | 25.83  | 33.59    |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.69   | 3.88              | 3.94   | 5.12     |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.20   | 7.50              | 7.62   | 9.91     |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 233.16 | 336.01            | 341.62 | 444.35   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 213.96 | 308.33            | 313.47 | 407.73   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 424.03 | 613.38            | 628.85 | 819.86   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 424.17 | 613.59            | 629.06 | 820.13   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 417.06 | 603.34            | 618.64 | 806.58   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.73  | 61.57             | 62.59  | 81.41    |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 41.83  | 62.63             | 68.96  | 91.62    |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 297.61 | 432.73            | 448.62 | 586.67   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 176.42 | 256.58            | 266.12 | 348.06   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 176.42 | 256.58            | 266.12 | 348.06   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 105.85 | 152.54            | 155.08 | 201.70   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 578.97 | 834.31            | 848.20 | 1,103.24 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 580.42 | 836.41            | 850.32 | 1,106.01 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 579.52   | 835.11            | 849.01   | 1,104.30 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,203.23 | 1,745.25          | 1,799.78 | 2,350.23 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,197.52 | 1,737.02          | 1,791.42 | 2,339.35 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,203.23 | 1,745.25          | 1,799.78 | 2,350.23 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,106.17 | 1,605.38          | 1,657.59 | 2,165.29 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 762.06   | 1,098.74          | 1,118.34 | 1,455.10 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 762.06   | 1,098.74          | 1,118.34 | 1,455.10 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 762.06   | 1,098.74          | 1,118.34 | 1,455.10 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 761.86   | 1,098.45          | 1,118.05 | 1,454.72 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 761.86   | 1,098.45          | 1,118.05 | 1,454.72 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.34     | 3.63              | 4.26     | 5.75     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.39     | 2.01              | 2.04     | 2.65     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.70     | 2.45              | 2.49     | 3.24     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03     | 0.04              | 0.04     | 0.05     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.93     | 11.43             | 11.62    | 15.11    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 158.50   | 228.40            | 232.21   | 302.04   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 43.90    | 63.26             | 64.31    | 83.65    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 475.73   | 685.53            | 696.91   | 906.45   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 77.17    | 111.21            | 113.05   | 147.04   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.78    | 31.38             | 31.91    | 41.50    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 21.78    | 31.38             | 31.91    | 41.50    |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-----------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
|   |                             | Moderate                                     |   |  |        |                   |        |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.42   | 6.37              | 6.48   | 8.43     |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 7.44   | 10.73             | 10.91  | 14.18    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 7.08   | 10.20             | 10.37  | 13.49    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.06   | 4.42              | 4.49   | 5.84     |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 85.77  | 123.60            | 125.65 | 163.43   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.98   | 2.85              | 2.89   | 3.77     |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 50.27  | 72.44             | 73.64  | 95.78    |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 51.77  | 74.60             | 75.84  | 98.64    |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 183.31 | 264.15            | 268.53 | 349.27   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 27.99  | 40.33             | 41.00  | 53.32    |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 62.14  | 99.06             | 122.08 | 166.56   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 152.25 | 219.39            | 223.04 | 290.10   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 584.27 | 855.88            | 901.40 | 1,183.83 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 580.37 | 850.26            | 895.69 | 1,176.40 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 580.37 | 850.26            | 895.69 | 1,176.40 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 36.97  | 53.28             | 54.16  | 70.45    |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.09  | 15.98             | 16.25  | 21.13    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 22.90  | 33.30             | 34.55  | 45.20    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 22.90  | 33.30             | 34.55  | 45.20    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 22.90  | 33.30             | 34.55  | 45.20    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 63.81  | 91.96             | 93.51  | 121.63 |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.99   | 5.81              | 6.05   | 7.93   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 93.88  | 135.29            | 137.53 | 178.88 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.88   | 5.59              | 5.69   | 7.39   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.30  | 33.57             | 34.13  | 44.39  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.90   | 14.27             | 14.50  | 18.86  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.59  | 25.35             | 25.77  | 33.51  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.42  | 17.89             | 18.19  | 23.66  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 185.65 | 277.38            | 304.11 | 403.60 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.85   | 1.23              | 1.25   | 1.62   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.94   | 1.36              | 1.38   | 1.79   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.86  | 21.41             | 21.77  | 28.31  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.21              | 0.21   | 0.28   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 146.13 | 210.57            | 214.06 | 278.42 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.77   | 6.88              | 6.99   | 9.09   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.89   | 8.52              | 8.75   | 11.41  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 68.83  | 99.18             | 100.83 | 131.15 |



**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 46.61  | 67.16             | 68.27    | 88.80    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 217.48 | 328.10            | 366.61   | 488.86   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 127.06 | 183.11            | 186.17   | 242.16   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.58   | 5.16              | 5.24     | 6.82     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 23.30  | 33.57             | 34.13    | 44.39    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.73   | 1.05              | 1.07     | 1.39     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.68   | 13.95             | 14.18    | 18.45    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.53   | 11.94             | 14.59    | 19.87    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.88   | 15.34             | 18.06    | 24.39    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.67  | 16.47             | 19.22    | 25.89    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 113.68 | 163.81            | 166.53   | 216.60   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 838.42 | 1,208.17          | 1,228.23 | 1,597.54 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 836.78 | 1,205.82          | 1,225.84 | 1,594.43 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 823.86 | 1,187.19          | 1,206.90 | 1,569.79 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 56.63  | 81.60             | 82.95    | 107.89   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.25  | 23.41             | 23.80    | 30.95    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.79  | 24.91             | 26.93    | 35.62    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.22  | 20.49             | 20.83    | 27.09    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.12  | 85.00             | 92.46    | 122.45   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 57.12  | 85.00             | 92.46    | 122.45   |

**Table A-10. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 63.85  | 92.01             | 93.54  | 121.66 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 38.65  | 55.69             | 56.62  | 73.64  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.75   | 9.73              | 9.89   | 12.87  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 19.69  | 28.37             | 28.84  | 37.52  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 82.73  | 119.21            | 121.19 | 157.63 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 63.72  | 91.83             | 93.35  | 121.42 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 158.66 | 228.63            | 232.42 | 302.30 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 32.76  | 47.21             | 47.99  | 62.42  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 28.35  | 40.86             | 41.53  | 54.02  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 173.05   | 223.03            | 224.09   | 267.86   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 833.89   | 1,073.26          | 1,078.18 | 1,288.34 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 706.02   | 908.69            | 912.85   | 1,090.78 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 346.26   | 446.20            | 448.32   | 535.88   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 123.03   | 158.34            | 159.07   | 190.07   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 44.55    | 57.37             | 57.64    | 68.89    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.79     | 6.17              | 6.20     | 7.41     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 33.11    | 42.65             | 42.85    | 51.21    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 307.58   | 396.16            | 398.01   | 475.68   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 382.76   | 492.93            | 495.22   | 591.84   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 382.76   | 492.93            | 495.22   | 591.84   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 73.64    | 94.82             | 95.26    | 113.84   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 72.07    | 92.76             | 93.18    | 111.34   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 57.35    | 73.92             | 74.27    | 88.78    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.43     | 4.45              | 4.47     | 5.35     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 36.64    | 47.16             | 47.38    | 56.61    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 140.48   | 180.92            | 181.76   | 217.23   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1,817.02 | 2,458.06          | 2,485.51 | 3,007.97 |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.56    | 19.43             | 20.14    | 25.51    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 110.86   | 142.69            | 143.34   | 171.28   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.56    | 45.77             | 45.98    | 54.94    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 338.06   | 435.11            | 437.11   | 522.31   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 343.96   | 442.84            | 444.89   | 531.66   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.96    | 16.68             | 16.76    | 20.02    |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.04     | 2.63              | 2.64     | 3.15     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.32     | 10.71             | 10.76    | 12.85    |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3,732.96 | 4,806.01          | 4,828.22 | 5,769.81 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,406.13 | 4,385.36          | 4,405.65 | 5,264.87 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,735.90 | 4,809.79          | 4,832.02 | 5,774.35 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.74    | 38.28             | 38.46    | 45.95    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 287.64   | 375.91            | 378.40   | 453.97   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.58     | 8.49              | 8.54     | 10.21    |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,659.28 | 2,136.61          | 2,146.53 | 2,565.26 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,634.65 | 2,104.89          | 2,114.67 | 2,527.18 |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,659.28 | 2,136.61          | 2,146.53 | 2,565.26 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 817.82   | 1,245.33          | 1,277.14 | 1,587.37 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 817.82   | 1,245.33          | 1,277.14 | 1,587.37 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 719.00   | 1,164.05          | 1,201.71 | 1,511.83 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.29     | 10.67             | 10.72    | 12.81    |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 25.45    | 32.76             | 32.91    | 39.32    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 167.77   | 215.93            | 216.92   | 259.20   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.33    | 18.44             | 18.52    | 22.13    |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 142.44   | 242.84            | 252.02   | 320.07   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 96.66    | 183.92            | 192.82   | 249.33   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 703.34   | 906.24            | 910.53   | 1,088.33 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 704.29   | 907.46            | 911.76   | 1,089.80 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 704.29   | 907.46            | 911.76   | 1,089.80 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 173.05   | 223.03            | 224.09   | 267.86   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.19     | 7.97              | 8.00     | 9.56     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 410.61   | 528.83            | 531.29   | 634.96   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,021.37 | 3,889.01          | 3,906.88 | 4,668.51 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 426.97   | 549.53            | 552.05   | 659.66   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 83.16    | 157.36            | 164.90   | 213.04   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.34     | 0.44              | 0.44     | 0.53     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 564.89   | 727.08            | 730.41   | 872.80   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.10     | 5.28              | 5.30     | 6.34     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 33.59    | 43.23             | 43.43    | 51.90    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 20.09    | 25.86             | 25.98    | 31.04    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 238.89   | 323.80            | 327.49   | 396.53   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 238.89   | 323.80            | 327.49   | 396.53   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 238.89   | 323.80            | 327.49   | 396.53   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 31.44    | 40.47             | 40.66    | 48.58    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 120.06   | 154.52            | 155.23   | 185.49   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.46     | 8.32              | 8.36     | 9.99     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 202.38   | 260.47            | 261.67   | 312.67   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 202.38   | 260.47            | 261.67   | 312.67   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 202.38   | 260.47            | 261.67   | 312.67   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 699.50   | 900.29            | 904.41   | 1,080.70 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,448.24 | 1,863.96          | 1,872.50 | 2,237.49 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,404.38 | 1,807.52          | 1,815.80 | 2,169.73 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 331.86   | 427.31            | 429.30   | 513.04   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4,021.28 | 5,400.46          | 5,455.65 | 6,590.56 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4,021.28 | 5,400.46          | 5,455.65 | 6,590.56 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4,091.67 | 5,491.05          | 5,546.66 | 6,699.31 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 108.46   | 139.60            | 140.24   | 167.57   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 50.18    | 64.59             | 64.89    | 77.53    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 108.46   | 139.60            | 140.24   | 167.57   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 107.44   | 138.28            | 138.92   | 165.99   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,297.14 | 1,669.87          | 1,677.57 | 2,004.68 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,311.09 | 1,687.82          | 1,695.60 | 2,026.23 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,253.73 | 1,613.99          | 1,621.44 | 1,937.61 |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 871.63   | 1,121.84          | 1,126.98 | 1,346.65 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 169.12   | 217.66            | 218.66   | 261.28   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 144.80   | 186.37            | 187.23   | 223.72   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 521.83   | 671.62            | 674.70   | 806.21   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,637.20 | 2,107.16          | 2,116.82 | 2,529.43 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,635.65 | 2,105.18          | 2,114.82 | 2,527.04 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,505.49 | 1,937.64          | 1,946.52 | 2,325.93 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,491.26 | 1,919.33          | 1,928.12 | 2,303.95 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 22.49    | 28.95             | 29.08    | 34.75    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 298.25   | 384.30            | 386.12   | 461.53   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,160.20 | 1,493.70          | 1,500.60 | 1,793.24 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,160.20 | 1,493.70          | 1,500.60 | 1,793.24 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,047.32 | 1,348.42          | 1,354.66 | 1,618.85 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 40.03    | 51.92             | 52.22    | 62.52    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 44.95    | 58.25             | 58.57    | 70.12    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28     | 0.36              | 0.36     | 0.43     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 393.33   | 506.23            | 508.55   | 607.68   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 519.53   | 668.66            | 671.72   | 802.66   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4,148.68 | 5,344.81          | 5,370.00 | 6,418.38 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4,233.61 | 5,454.11          | 5,479.81 | 6,549.60 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 698.91   | 899.69            | 903.83   | 1,080.06 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 605.51   | 779.48            | 783.08   | 935.76   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,462.56 | 1,922.84          | 1,937.12 | 2,327.57 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,893.62 | 2,478.38          | 2,495.32 | 2,994.81 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,893.62 | 2,478.38          | 2,495.32 | 2,994.81 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 854.84   | 1,107.66          | 1,113.74 | 1,333.19 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 191.10   | 253.35            | 255.51   | 307.66   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2,817.40 | 3,633.65          | 3,651.31 | 4,365.40 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2,759.53 | 3,559.16          | 3,576.48 | 4,275.99 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2,759.53 | 3,559.16          | 3,576.48 | 4,275.99 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.93     | 7.64              | 7.67     | 9.17     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.62    | 23.97             | 24.08    | 28.77    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.48    | 26.36             | 26.48    | 31.64    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.69     | 8.62              | 8.66     | 10.34    |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 65.46    | 84.25             | 84.64    | 101.13   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 164.48   | 307.49            | 321.88   | 415.08   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.10     | 0.13              | 0.13     | 0.16     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 24.07    | 36.68             | 37.62    | 46.77    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 270.49   | 371.11            | 375.93   | 456.51   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 47.96    | 84.49             | 87.96    | 112.35   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 136.17   | 175.26            | 176.06   | 210.38   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.80     | 2.31              | 2.32     | 2.78     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 127.26   | 163.79            | 164.54   | 196.61   |



**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|----------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 161.48 | 207.83            | 208.79   | 249.48   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 206.97 | 266.39            | 267.61   | 319.77   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 21.02  | 35.29             | 36.57    | 46.32    |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 34.22  | 52.28             | 53.63    | 66.71    |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.87   | 1.12              | 1.12     | 1.34     |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 20.52  | 26.41             | 26.53    | 31.70    |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 2.42   | 3.11              | 3.13     | 3.74     |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 378.56 | 487.22            | 489.45   | 584.86   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 65.20  | 83.92             | 84.31    | 100.74   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 251.08 | 323.15            | 324.63   | 387.91   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 115.91 | 149.18            | 149.86   | 179.07   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 255.88 | 329.33            | 330.84   | 395.32   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 14.24  | 18.33             | 18.41    | 22.00    |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 21.90  | 28.19             | 28.31    | 33.83    |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 304.60 | 392.30            | 394.13   | 471.04   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 515.60 | 663.60            | 666.64   | 796.58   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 24.76  | 31.86             | 32.01    | 38.25    |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 17.62  | 33.53             | 35.16    | 45.46    |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 933.56 | 1,201.54          | 1,207.04 | 1,442.32 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 933.19 | 1,201.07          | 1,206.57 | 1,441.75 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 213.41 | 275.40            | 276.76   | 330.95   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.01    | 30.96             | 31.11    | 37.19    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 35.27    | 45.39             | 45.60    | 54.49    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 661.97   | 851.99            | 855.89   | 1,022.72 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 456.38   | 587.39            | 590.08   | 705.10   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.15    | 17.54             | 18.05    | 22.58    |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.69    | 18.23             | 18.75    | 23.41    |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 63.52    | 81.75             | 82.13    | 98.14    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 537.69   | 692.16            | 695.34   | 830.92   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 504.52   | 649.47            | 652.46   | 779.68   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 705.94   | 908.70            | 912.88   | 1,090.86 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 622.25   | 800.87            | 804.53   | 961.35   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.50     | 1.94              | 1.95     | 2.32     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.28     | 1.65              | 1.66     | 1.98     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.28     | 1.65              | 1.66     | 1.98     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 129.17   | 166.24            | 167.01   | 199.56   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.51     | 10.96             | 11.01    | 13.17    |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 3,858.81 | 5,420.58          | 5,506.92 | 6,724.72 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,857.12 | 5,418.40          | 5,504.72 | 6,722.10 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 28.67    | 36.89             | 37.06    | 44.29    |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Johnsonville, TN                                      |                             |  |   |  |          |                   |          |          |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 194.42   | 300.55            | 308.75   | 384.93   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 288.46   | 421.59            | 430.33   | 530.22   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 20.72    | 26.67             | 26.79    | 32.01    |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 115.90   | 149.17            | 149.85   | 179.06   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 141.48   | 182.09            | 182.93   | 218.58   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 141.48   | 182.09            | 182.93   | 218.58   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 140.78   | 181.19            | 182.02   | 217.50   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 23.31    | 35.70             | 36.63    | 45.59    |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 51.45    | 66.21             | 66.52    | 79.48    |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.82     | 1.05              | 1.06     | 1.26     |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,393.95 | 1,794.08          | 1,802.30 | 2,153.61 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1,075.64 | 1,384.40          | 1,390.75 | 1,661.83 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 262.17   | 337.42            | 338.97   | 405.04   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 4.37     | 5.63              | 5.65     | 6.76     |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 57.21    | 73.63             | 73.97    | 88.38    |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 29.72    | 38.27             | 38.44    | 45.94    |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 105.07   | 135.23            | 135.85   | 162.33   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 108.01   | 139.02            | 139.66   | 166.88   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 108.01   | 139.02            | 139.66   | 166.88   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 28.83    | 37.11             | 37.28    | 44.55    |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 83.06    | 106.90            | 107.39   | 128.32   |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 33.59    | 43.24             | 43.43    | 51.90    |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.57     | 3.31              | 3.32     | 3.97     |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 62.96    | 81.03             | 81.40    | 97.27    |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 68.41    | 88.05             | 88.45    | 105.70   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 68.41    | 88.05             | 88.45    | 105.70   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 24.76    | 31.86             | 32.01    | 38.25    |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.77     | 6.14              | 6.16     | 7.36     |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 389.72   | 501.75            | 504.06   | 602.37   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,033.51 | 1,331.35          | 1,337.61 | 1,598.71 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 79.34    | 102.11            | 102.58   | 122.57   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 53.67    | 74.77             | 75.89    | 92.49    |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 53.67    | 74.77             | 75.89    | 92.49    |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.07    | 16.82             | 16.90    | 20.20    |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.64    | 16.27             | 16.34    | 19.53    |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.71     | 6.06              | 6.08     | 7.27     |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 41.19    | 53.01             | 53.26    | 63.64    |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 40.95    | 52.71             | 52.95    | 63.27    |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 44.44    | 57.19             | 57.45    | 68.65    |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 690.58   | 888.81            | 892.88   | 1,066.92 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 419.55   | 539.98            | 542.46   | 648.19   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 548.62   | 706.10            | 709.34   | 847.60   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 548.62   | 706.10            | 709.34   | 847.60   |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 122.03 | 157.05            | 157.77 | 188.53 |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 39.03  | 50.24             | 50.47  | 60.31  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.46   | 4.45              | 4.47   | 5.35   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 149.98 | 193.03            | 193.92 | 231.72 |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 325.45 | 514.75            | 530.09 | 663.90 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.83  | 26.81             | 26.93  | 32.18  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 245.80 | 412.19            | 427.06 | 540.78 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.15   | 1.47              | 1.48   | 1.77   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.12   | 11.73             | 11.79  | 14.08  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.12   | 6.59              | 6.62   | 7.91   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.00  | 18.01             | 18.10  | 21.62  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 287.47 | 369.99            | 371.69 | 444.14 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 287.47 | 369.99            | 371.69 | 444.14 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 287.47 | 369.99            | 371.69 | 444.14 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 287.47 | 369.99            | 371.69 | 444.14 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.97   | 1.24              | 1.25   | 1.49   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 127.26 | 163.79            | 164.54 | 196.61 |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 355.51 | 457.57            | 459.66 | 549.26 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 869.28   | 1,118.82          | 1,123.94  | 1,343.02  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 878.96   | 1,131.26          | 1,136.45  | 1,357.96  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.92    | 25.64             | 25.76     | 30.78     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 97.26    | 184.69            | 193.60    | 250.26    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 290.70   | 503.06            | 522.82    | 665.72    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.36     | 9.47              | 9.51      | 11.36     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.79     | 6.17              | 6.20      | 7.41      |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.79     | 6.17              | 6.20      | 7.41      |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 179.25   | 288.44            | 297.59    | 373.96    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.03     | 3.90              | 3.92      | 4.68      |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 50.87    | 65.47             | 65.77     | 78.59     |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 42.06    | 54.13             | 54.38     | 64.98     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 23.49    | 30.24             | 30.38     | 36.30     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8,560.05 | 11,168.95         | 11,240.66 | 13,479.93 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 753.23   | 1,120.46          | 1,146.05  | 1,417.46  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 753.23   | 1,120.46          | 1,146.05  | 1,417.46  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 8,567.35 | 11,178.34         | 11,250.10 | 13,491.21 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 8,566.60 | 11,177.38         | 11,249.13 | 13,490.05 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 8,565.11 | 11,175.46         | 11,247.20 | 13,487.74 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 8,566.11 | 11,176.75         | 11,248.50 | 13,489.30 |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8,560.05 | 11,168.95         | 11,240.66 | 13,479.93 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 695.78   | 895.52            | 899.62    | 1,074.98  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 671.21   | 863.89            | 867.85    | 1,037.01  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 57.45    | 73.95             | 74.29     | 88.77     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 341.67   | 540.89            | 557.06    | 697.81    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 131.64   | 169.43            | 170.21    | 203.39    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 131.64   | 169.43            | 170.21    | 203.39    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30     | 0.39              | 0.39      | 0.46      |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 253.46   | 467.26            | 488.51    | 628.58    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 47.11    | 60.63             | 60.90     | 72.78     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 66.54    | 85.64             | 86.04     | 102.81    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1,997.30 | 2,570.64          | 2,582.41  | 3,085.77  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 245.13   | 315.49            | 316.94    | 378.72    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 63.89    | 82.23             | 82.61     | 98.71     |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.85    | 31.98             | 32.13     | 38.39     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 52.04    | 94.60             | 98.78     | 126.82    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 232.05   | 298.66            | 300.03    | 358.51    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 19.69    | 25.34             | 25.46     | 30.42     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.80    | 70.52             | 70.85     | 84.66     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 516.78   | 682.07            | 687.49   | 826.88   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 592.80   | 779.96            | 785.83   | 944.41   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 695.07   | 911.61            | 918.09   | 1,102.45 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.74     | 7.39              | 7.42     | 8.87     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.74     | 7.39              | 7.42     | 8.87     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.74     | 7.39              | 7.42     | 8.87     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 914.77   | 1,177.37          | 1,182.76 | 1,413.31 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 657.86   | 846.71            | 850.59   | 1,016.39 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1,892.60 | 2,555.34          | 2,583.22 | 3,124.73 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 50.53    | 65.34             | 65.68    | 78.58    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 48.31    | 62.47             | 62.79    | 75.12    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 103.49   | 133.21            | 133.83   | 159.92   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 53.87    | 69.34             | 69.66    | 83.23    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 14.81    | 19.07             | 19.15    | 22.89    |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.39     | 0.51              | 0.51     | 0.61     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.78     | 3.58              | 3.60     | 4.30     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.05    | 24.52             | 24.63    | 29.43    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.23     | 0.30              | 0.30     | 0.36     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.23     | 0.30              | 0.30     | 0.36     |



**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|---|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.63    | 29.14             | 29.28     | 34.99     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 93.37    | 120.17            | 120.72    | 144.25    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.56     | 2.01              | 2.02      | 2.41      |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.93     | 7.63              | 7.67      | 9.16      |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.41    | 14.69             | 14.75     | 17.63     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 102.61   | 132.07            | 132.68    | 158.54    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.66     | 6.00              | 6.03      | 7.21      |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.74    | 55.01             | 55.26     | 66.04     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,022.53 | 1,316.45          | 1,322.54  | 1,580.46  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.49     | 3.20              | 3.22      | 3.85      |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 78.96    | 101.63            | 102.09    | 122.00    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 78.66    | 101.24            | 101.70    | 121.52    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.80    | 13.90             | 13.97     | 16.69     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 475.52   | 612.33            | 615.18    | 735.19    |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.78     | 13.20             | 13.69     | 17.37     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 308.57   | 397.15            | 398.97    | 476.74    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8,828.10 | 11,421.12         | 11,481.41 | 13,738.09 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 4,930.60 | 6,392.10          | 6,427.64  | 7,695.19  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8,862.37 | 11,465.31         | 11,525.81 | 13,791.17 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8,838.70 | 11,434.84         | 11,495.21 | 13,754.60 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8,828.10 | 11,421.12         | 11,481.41 | 13,738.09 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 30.50    | 39.34             | 39.53     | 47.26     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 25.86    | 33.28             | 33.44     | 39.95     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 889.80   | 1,145.35          | 1,150.62  | 1,374.94  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.97     | 1.24              | 1.25      | 1.49      |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 30.21    | 38.88             | 39.06     | 46.68     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 30.21    | 38.88             | 39.06     | 46.68     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.65    | 18.85             | 18.94     | 22.63     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 55.82    | 71.84             | 72.17     | 86.24     |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 108.50   | 139.65            | 140.29    | 167.63    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 53.91    | 69.38             | 69.70     | 83.28     |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 22.25    | 28.64             | 28.77     | 34.38     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53     | 0.68              | 0.69      | 0.82      |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 46.12    | 59.36             | 59.63     | 71.26     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 80.58    | 115.96            | 118.15    | 145.08    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 611.53   | 848.70            | 860.93    | 1,048.34  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,684.05 | 3,668.60          | 3,714.41  | 4,506.50  |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,684.05 | 3,668.60          | 3,714.41 | 4,506.50 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4,129.53 | 5,529.03          | 5,583.35 | 6,739.74 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3,877.02 | 5,204.02          | 5,256.86 | 6,349.61 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,910.65 | 2,459.11          | 2,470.38 | 2,951.90 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,005.56 | 2,581.27          | 2,593.09 | 3,098.54 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,004.08 | 2,579.35          | 2,591.17 | 3,096.24 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.01     | 1.31              | 1.31     | 1.57     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 35.68    | 45.92             | 46.13    | 55.13    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.55    | 21.30             | 21.40    | 25.57    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 224.85   | 289.39            | 290.72   | 347.39   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.82    | 17.78             | 17.86    | 21.35    |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 101.32   | 130.48            | 131.09   | 156.66   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,076.18 | 1,386.04          | 1,392.52 | 1,664.25 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,076.18 | 1,386.04          | 1,392.52 | 1,664.25 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 979.03   | 1,261.00          | 1,266.91 | 1,514.15 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 979.03   | 1,261.00          | 1,266.91 | 1,514.15 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.95    | 21.81             | 21.91    | 26.18    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 639.04   | 823.36            | 827.25   | 988.78   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 402.34   | 518.48            | 520.95   | 622.70   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-----------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 536.25   | 690.18            | 693.34    | 828.49    |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 51.06    | 65.72             | 66.02     | 78.89     |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 524.33   | 675.33            | 678.49    | 810.89    |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 38.84    | 50.00             | 50.23     | 60.02     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 217.55   | 280.01            | 281.29    | 336.12    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 11.22    | 14.44             | 14.51     | 17.34     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 755.91   | 972.90            | 977.35    | 1,167.86  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,277.89 | 1,644.71          | 1,652.25  | 1,974.31  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.50     | 1.93              | 1.94      | 2.32      |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 238.87   | 307.45            | 308.86    | 369.07    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 238.87   | 307.45            | 308.86    | 369.07    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 238.87   | 307.45            | 308.86    | 369.07    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 177.11   | 227.95            | 229.00    | 273.64    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 21.68    | 27.90             | 28.03     | 33.49     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 768.78   | 989.47            | 994.00    | 1,187.75  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 241.18   | 310.42            | 311.84    | 372.62    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 241.18   | 310.42            | 311.84    | 372.62    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 281.72   | 362.59            | 364.25    | 435.25    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 8,525.31 | 11,124.23         | 11,195.74 | 13,426.25 |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |          |                   |          |          |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 700.92   | 902.25            | 906.40   | 1,083.12 |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 167.38   | 215.43            | 216.42   | 258.60   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 55.73    | 71.72             | 72.05    | 86.10    |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.81    | 16.48             | 16.56    | 19.79    |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.44    | 21.16             | 21.26    | 25.40    |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 721.65   | 928.98            | 933.26   | 1,115.23 |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 676.23   | 870.47            | 874.48   | 1,044.97 |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,335.46 | 1,743.01          | 1,754.27 | 2,103.90 |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,335.77 | 1,743.40          | 1,754.66 | 2,104.37 |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,316.39 | 1,718.46          | 1,729.61 | 2,074.44 |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 137.64   | 177.15            | 177.96   | 212.64   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 121.57   | 180.63            | 184.73   | 228.42   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 930.94   | 1,237.95          | 1,249.01 | 1,505.12 |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 550.87   | 733.16            | 739.80   | 891.68   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 550.87   | 733.16            | 739.80   | 891.68   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 314.10   | 404.29            | 406.14   | 485.32   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1,830.68 | 2,356.38          | 2,367.20 | 2,828.67 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,834.41 | 2,361.18          | 2,372.02 | 2,834.44 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,832.53 | 2,358.76          | 2,369.59 | 2,831.53 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,773.66 | 4,973.82          | 5,012.44 | 6,026.64 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,755.84 | 4,950.88          | 4,989.40 | 5,999.11 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,773.66 | 4,973.82          | 5,012.44 | 6,026.64 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3,465.06 | 4,576.63          | 4,613.43 | 5,549.86 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2,416.55 | 3,116.51          | 3,131.64 | 3,744.06 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,416.55 | 3,116.51          | 3,131.64 | 3,744.06 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,416.55 | 3,116.51          | 3,131.64 | 3,744.06 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,416.05 | 3,115.87          | 3,130.99 | 3,743.29 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,416.05 | 3,115.87          | 3,130.99 | 3,743.29 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.23     | 10.63             | 11.04    | 14.02    |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.81     | 4.90              | 4.92     | 5.88     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.38     | 6.92              | 6.95     | 8.31     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 25.86    | 33.28             | 33.44    | 39.95    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 500.95   | 644.84            | 647.80   | 774.10   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 139.06   | 178.98            | 179.80   | 214.85   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1,502.54 | 1,933.85          | 1,942.71 | 2,321.38 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 241.42   | 310.72            | 312.14   | 372.98   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.84    | 88.60             | 89.00    | 106.35   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 68.84    | 88.60             | 89.00    | 106.35   |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
|   |                             | Moderate                                     |   |  |          |                   |          |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 14.19    | 18.27             | 18.35    | 21.93    |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 23.53    | 30.28             | 30.42    | 36.35    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 22.76    | 29.29             | 29.42    | 35.16    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 9.17     | 11.81             | 11.86    | 14.17    |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 271.11   | 348.93            | 350.53   | 418.85   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.37     | 8.20              | 8.24     | 9.85     |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 156.89   | 201.93            | 202.86   | 242.40   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 161.69   | 208.11            | 209.06   | 249.81   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 579.39   | 745.71            | 749.12   | 895.14   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 90.93    | 117.03            | 117.56   | 140.48   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 169.08   | 315.34            | 330.02   | 425.43   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 474.15   | 610.28            | 613.08   | 732.59   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1,806.71 | 2,468.51          | 2,499.21 | 3,031.89 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1,794.39 | 2,452.65          | 2,483.28 | 3,012.85 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1,794.39 | 2,452.65          | 2,483.28 | 3,012.85 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 116.87   | 150.41            | 151.10   | 180.55   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 35.89    | 46.20             | 46.41    | 55.46    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 71.48    | 95.19             | 96.05    | 115.79   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 71.48    | 95.19             | 96.05    | 115.79   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 71.48    | 95.19             | 96.05    | 115.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 197.30 | 254.03            | 255.21 | 304.99   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.18  | 15.07             | 15.23  | 18.41    |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 296.74 | 381.92            | 383.67 | 458.45   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.19  | 15.69             | 15.76  | 18.83    |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 73.63  | 94.77             | 95.20  | 113.76   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 26.76  | 34.45             | 34.60  | 41.35    |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 54.49  | 70.14             | 70.46  | 84.19    |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 39.24  | 50.51             | 50.74  | 60.63    |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 558.72 | 820.26            | 837.72 | 1,033.17 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.74   | 3.53              | 3.54   | 4.23     |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.96   | 3.81              | 3.83   | 4.57     |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 47.80  | 61.52             | 61.80  | 73.85    |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 462.53 | 595.29            | 598.02 | 714.59   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.59  | 22.64             | 22.74  | 27.18    |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 18.50  | 24.20             | 24.36  | 29.23    |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 217.55 | 280.01            | 281.29 | 336.12   |



**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 147.13   | 189.36            | 190.23   | 227.31   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 644.87   | 981.08            | 1,006.04 | 1,250.19 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 401.57   | 516.97            | 519.36   | 620.64   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.46    | 19.90             | 19.99    | 23.89    |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 73.63    | 94.77             | 95.20    | 113.76   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2.23     | 2.87              | 2.88     | 3.45     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.38    | 39.10             | 39.28    | 46.94    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.48    | 37.57             | 39.27    | 50.49    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 27.90    | 47.19             | 48.94    | 62.06    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.19    | 50.16             | 51.92    | 65.63    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 359.31   | 462.45            | 464.57   | 555.12   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,650.20 | 3,411.02          | 3,426.66 | 4,094.61 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,645.16 | 3,404.54          | 3,420.15 | 4,086.83 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,604.20 | 3,351.83          | 3,367.19 | 4,023.55 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 175.53   | 225.91            | 226.95   | 271.18   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 52.53    | 67.61             | 67.92    | 81.15    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 57.36    | 81.20             | 82.57    | 101.01   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.71    | 60.12             | 60.40    | 72.17    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 172.83   | 250.06            | 254.95   | 313.43   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 172.83   | 250.06            | 254.95   | 313.43   |

**Table A-11. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 201.57 | 259.43            | 260.61 | 311.41 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 126.30 | 162.56            | 163.30 | 195.13 |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 22.58  | 29.06             | 29.19  | 34.88  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 62.50  | 80.44             | 80.81  | 96.56  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 261.48 | 336.54            | 338.08 | 403.98 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 201.41 | 259.23            | 260.42 | 311.18 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 501.48 | 645.43            | 648.38 | 774.77 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 103.91 | 133.73            | 134.35 | 160.53 |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 88.99  | 114.54            | 115.06 | 137.49 |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 250.31   | 318.01            | 318.05   | 374.70   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1,201.93 | 1,524.77          | 1,524.92 | 1,795.86 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,017.47 | 1,290.77          | 1,290.90 | 1,520.25 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 498.94   | 633.81            | 633.89   | 746.77   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 177.30   | 224.92            | 224.94   | 264.91   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 71.45    | 90.71             | 90.72    | 106.86   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.65     | 5.91              | 5.91     | 6.97     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 33.20    | 42.16             | 42.16    | 49.67    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 443.22   | 562.73            | 562.79   | 662.92   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 551.58   | 700.18            | 700.26   | 824.82   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 551.58   | 700.18            | 700.26   | 824.82   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 106.12   | 134.69            | 134.71   | 158.66   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 103.86   | 131.76            | 131.77   | 155.18   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 80.68    | 102.51            | 102.53   | 120.79   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.77     | 6.10              | 6.10     | 7.20     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 52.81    | 66.99             | 67.00    | 78.90    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 202.43   | 256.99            | 257.02   | 302.74   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2,603.81 | 3,488.98          | 3,494.56 | 4,171.27 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.47    | 26.71             | 26.91    | 33.82    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 159.77   | 202.68            | 202.70   | 238.72   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 51.25    | 65.02             | 65.02    | 76.58    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 487.52   | 618.49            | 618.55   | 728.46   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 495.67   | 629.04            | 629.11   | 740.96   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.68    | 23.69             | 23.70    | 27.90    |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.07     | 2.62              | 2.62     | 3.09     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.61    | 17.27             | 17.27    | 20.33    |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5,379.50 | 6,826.78          | 6,827.51 | 8,041.27 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4,908.50 | 6,229.26          | 6,229.93 | 7,337.52 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5,383.65 | 6,832.05          | 6,832.78 | 8,047.47 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.59    | 54.03             | 54.04    | 63.64    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 415.35   | 535.77            | 536.07   | 633.98   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.14    | 12.90             | 12.91    | 15.21    |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2,391.38 | 3,035.31          | 3,035.65 | 3,575.48 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,357.00 | 2,991.67          | 2,992.00 | 3,524.07 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,391.38 | 3,035.31          | 3,035.65 | 3,575.48 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,154.78 | 1,764.70          | 1,773.33 | 2,178.46 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,154.78 | 1,764.70          | 1,773.33 | 2,178.46 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,006.71 | 1,648.23          | 1,658.86 | 2,065.10 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.72    | 16.14             | 16.14    | 19.01    |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 36.68    | 46.53             | 46.53    | 54.80    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 241.78   | 306.72            | 306.75   | 361.26   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.65    | 26.19             | 26.19    | 30.85    |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 196.59   | 341.94            | 344.58   | 433.61   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 131.95   | 259.94            | 262.57   | 337.03   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,013.48 | 1,287.27          | 1,287.44 | 1,516.66 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,013.97 | 1,287.90          | 1,288.07 | 1,517.39 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,013.97 | 1,287.90          | 1,288.07 | 1,517.39 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 250.31   | 318.01            | 318.05   | 374.70   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.83     | 12.47             | 12.47    | 14.68    |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 598.87   | 760.27            | 760.36   | 895.61   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4,357.98 | 5,529.10          | 5,529.65 | 6,512.29 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 615.97   | 781.43            | 781.50   | 920.36   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 112.89   | 221.47            | 223.70   | 286.96   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31     | 0.39              | 0.39     | 0.46     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 813.77   | 1,032.40          | 1,032.50 | 1,215.96 |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.46     | 5.66              | 5.66     | 6.67     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 48.41    | 61.41             | 61.42    | 72.33    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 29.67    | 37.63             | 37.64    | 44.33    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 342.25   | 459.59            | 460.35   | 549.77   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 342.25   | 459.59            | 460.35   | 549.77   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 342.25   | 459.59            | 460.35   | 549.77   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 45.32    | 57.49             | 57.49    | 67.71    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 173.00   | 219.47            | 219.49   | 258.49   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.12     | 2.69              | 2.69     | 3.17     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 291.66   | 370.00            | 370.03   | 435.78   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 291.66   | 370.00            | 370.03   | 435.78   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 291.66   | 370.00            | 370.03   | 435.78   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1,008.17 | 1,278.97          | 1,279.10 | 1,506.36 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2,092.57 | 2,654.65          | 2,654.90 | 3,126.61 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,031.76 | 2,577.51          | 2,577.76 | 3,035.76 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 478.24   | 607.00            | 607.07   | 715.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5,771.07 | 7,670.86          | 7,681.47 | 9,151.32 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5,771.07 | 7,670.86          | 7,681.47 | 9,151.32 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,873.10 | 7,800.30          | 7,810.92 | 9,303.76 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 156.31   | 198.29            | 198.31   | 233.55   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 78.76    | 99.91             | 99.92    | 117.68   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 156.31   | 198.29            | 198.31   | 233.55   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 155.60   | 197.39            | 197.41   | 232.49   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,869.99 | 2,372.86          | 2,373.11 | 2,794.92 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,889.30 | 2,397.37          | 2,397.62 | 2,823.79 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,806.64 | 2,292.50          | 2,292.74 | 2,700.28 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1,258.83 | 1,596.96          | 1,597.12 | 1,880.89 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 243.72   | 309.19            | 309.22   | 364.16   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 208.68   | 264.74            | 264.76   | 311.80   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 753.63   | 956.06            | 956.16   | 1,126.04 |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2,360.88 | 2,995.03          | 2,995.32 | 3,527.51 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,358.65 | 2,992.20          | 2,992.49 | 3,524.18 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2,169.06 | 2,751.68          | 2,751.95 | 3,240.90 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2,150.43 | 2,728.04          | 2,728.31 | 3,213.06 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 32.01    | 40.61             | 40.61    | 47.83    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 431.27   | 547.80            | 547.88   | 645.43   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,671.94 | 2,121.75          | 2,121.97 | 2,499.21 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,671.94 | 2,121.75          | 2,121.97 | 2,499.21 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,508.86 | 1,914.87          | 1,915.07 | 2,255.55 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 57.71    | 73.85             | 73.87    | 87.19    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 56.96    | 72.88             | 72.91    | 86.05    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 547.84   | 694.99            | 695.06   | 818.55   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 749.78   | 951.17            | 951.26   | 1,120.28 |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 5,978.14 | 7,592.04          | 7,593.01 | 8,944.53 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6,100.53 | 7,747.31          | 7,748.30 | 9,127.41 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,007.20 | 1,277.99          | 1,278.12 | 1,505.28 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 872.61   | 1,107.23          | 1,107.35 | 1,304.17 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,104.00 | 2,732.03          | 2,734.07 | 3,238.74 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,725.12 | 3,521.17          | 3,523.32 | 4,168.56 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,725.12 | 3,521.17          | 3,523.32 | 4,168.56 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1,052.21 | 1,346.39          | 1,346.84 | 1,589.61 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 336.83   | 438.80            | 439.17   | 520.65   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4,059.71 | 5,161.83          | 5,162.66 | 6,083.44 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3,976.31 | 5,056.03          | 5,056.85 | 5,958.82 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3,976.31 | 5,056.03          | 5,056.85 | 5,958.82 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.72     | 11.06             | 11.06    | 13.03    |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.21    | 37.06             | 37.07    | 43.65    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 32.61    | 41.37             | 41.37    | 48.73    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.76     | 12.38             | 12.38    | 14.59    |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 104.66   | 132.77            | 132.78   | 156.37   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 226.29   | 436.04            | 440.29   | 563.27   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.09     | 0.11              | 0.11     | 0.14     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 29.96    | 46.86             | 47.12    | 58.15    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 377.71   | 514.88            | 515.93   | 618.33   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 64.28    | 116.95            | 117.96   | 149.55   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 196.24   | 248.95            | 248.98   | 293.21   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.15     | 4.00              | 4.00     | 4.71     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 189.25   | 240.09            | 240.11   | 282.77   |



**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 232.72   | 295.22            | 295.25   | 347.71   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 303.82   | 385.42            | 385.46   | 453.95   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 27.73    | 47.99             | 48.36    | 60.80    |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 47.58    | 73.17             | 73.54    | 90.46    |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.09     | 1.39              | 1.39     | 1.63     |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 29.99    | 38.05             | 38.05    | 44.81    |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.27     | 4.15              | 4.15     | 4.88     |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 545.55   | 692.08            | 692.15   | 815.13   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 92.96    | 117.93            | 117.94   | 138.89   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 361.84   | 459.03            | 459.07   | 540.64   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 167.04   | 211.90            | 211.93   | 249.58   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 368.75   | 467.80            | 467.85   | 550.97   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 23.04    | 29.23             | 29.23    | 34.42    |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 31.56    | 40.04             | 40.04    | 47.15    |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 433.87   | 550.81            | 550.88   | 648.88   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 743.52   | 943.23            | 943.32   | 1,110.92 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 37.98    | 48.18             | 48.19    | 56.75    |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 24.06    | 47.40             | 47.88    | 61.45    |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1,342.51 | 1,703.11          | 1,703.28 | 2,005.90 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1,342.77 | 1,703.44          | 1,703.61 | 2,006.29 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 307.46   | 391.19            | 391.26   | 461.12   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.60    | 43.98             | 43.99    | 51.83    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 50.82    | 64.48             | 64.48    | 75.94    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 954.09   | 1,210.36          | 1,210.48 | 1,425.55 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 657.71   | 834.37            | 834.46   | 982.72   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.80    | 23.73             | 23.87    | 29.60    |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.55    | 25.95             | 26.09    | 32.22    |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 91.72    | 116.36            | 116.37   | 137.04   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 774.86   | 983.19            | 983.29   | 1,158.05 |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 727.07   | 922.56            | 922.65   | 1,086.64 |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,017.33 | 1,290.79          | 1,290.92 | 1,520.34 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 898.52   | 1,139.87          | 1,139.98 | 1,342.52 |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.91     | 2.43              | 2.43     | 2.86     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.81     | 2.30              | 2.30     | 2.71     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.81     | 2.30              | 2.30     | 2.71     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 186.15   | 236.15            | 236.17   | 278.13   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.76    | 16.21             | 16.21    | 19.10    |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5,504.98 | 7,689.77          | 7,710.44 | 9,292.54 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,502.99 | 7,687.24          | 7,707.91 | 9,289.56 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 41.31    | 52.41             | 52.41    | 61.73    |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Johnsonville, TN                                      |                             |  |   |  |          |                   |          |          |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 273.97   | 425.82            | 428.06   | 527.63   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 408.76   | 596.81            | 599.08   | 729.03   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 168.41   | 213.65            | 213.67   | 251.63   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 203.89   | 258.66            | 258.68   | 304.65   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 203.89   | 258.66            | 258.68   | 304.65   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 203.63   | 258.33            | 258.36   | 304.26   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 28.32    | 44.78             | 45.04    | 55.70    |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 74.25    | 94.19             | 94.20    | 110.94   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.95     | 1.21              | 1.21     | 1.42     |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2,008.86 | 2,548.45          | 2,548.70 | 3,001.54 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1,550.14 | 1,966.51          | 1,966.70 | 2,316.13 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 366.22   | 464.59            | 464.64   | 547.19   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 7.81     | 9.91              | 9.91     | 11.67    |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 82.44    | 104.59            | 104.60   | 123.18   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 43.38    | 55.04             | 55.05    | 64.84    |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 155.95   | 197.83            | 197.85   | 233.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 155.17   | 196.85            | 196.87   | 231.84   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 155.17   | 196.85            | 196.87   | 231.84   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 41.75    | 52.96             | 52.97    | 62.38    |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 119.70   | 151.85            | 151.86   | 178.85   |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 51.26    | 65.02             | 65.03    | 76.59    |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.30     | 4.18              | 4.18     | 4.92     |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 90.73    | 115.11            | 115.12   | 135.57   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 97.67    | 123.91            | 123.92   | 145.94   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 97.67    | 123.91            | 123.92   | 145.94   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 37.98    | 48.18             | 48.19    | 56.75    |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.94     | 8.81              | 8.81     | 10.37    |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 561.62   | 712.71            | 712.79   | 839.50   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,489.25 | 1,891.09          | 1,891.33 | 2,227.91 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 114.33   | 145.04            | 145.06   | 170.83   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 66.76    | 93.55             | 93.81    | 113.13   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 66.76    | 93.55             | 93.81    | 113.13   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.84    | 23.90             | 23.90    | 28.15    |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.84    | 25.18             | 25.18    | 29.65    |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.27     | 7.95              | 7.95     | 9.37     |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 72.21    | 91.60             | 91.61    | 107.89   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 72.22    | 91.62             | 91.63    | 107.91   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 76.19    | 96.65             | 96.66    | 113.84   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 995.21   | 1,262.53          | 1,262.66 | 1,487.00 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 605.07   | 767.59            | 767.67   | 904.06   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 790.39   | 1,002.69          | 1,002.79 | 1,180.96 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 790.39   | 1,002.69          | 1,002.79 | 1,180.96 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 175.91 | 223.16            | 223.18 | 262.84 |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 54.57  | 69.23             | 69.24  | 81.54  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.22  | 19.31             | 19.31  | 22.74  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 216.14 | 274.20            | 274.23 | 322.95 |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 445.01 | 713.63            | 717.90 | 890.25 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 28.43  | 36.07             | 36.07  | 42.48  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 326.93 | 563.77            | 568.03 | 713.73 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.51   | 1.91              | 1.91   | 2.25   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.99  | 13.94             | 13.95  | 16.42  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.17   | 7.83              | 7.83   | 9.22   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.46  | 18.35             | 18.35  | 21.61  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 414.28 | 525.56            | 525.61 | 619.00 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 414.28 | 525.56            | 525.61 | 619.00 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 414.28 | 525.56            | 525.61 | 619.00 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 414.28 | 525.56            | 525.61 | 619.00 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.86   | 1.09              | 1.09   | 1.28   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 189.25 | 240.09            | 240.11 | 282.77 |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 512.34 | 649.96            | 650.03 | 765.52 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,255.25  | 1,592.42          | 1,592.58  | 1,875.54  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,267.77  | 1,608.30          | 1,608.46  | 1,894.24  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 29.36     | 37.25             | 37.25     | 43.87     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 132.88    | 261.12            | 263.75    | 338.42    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 405.78    | 715.23            | 720.95    | 909.27    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.01     | 15.23             | 15.23     | 17.94     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.65      | 5.91              | 5.91      | 6.97      |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.65      | 5.91              | 5.91      | 6.97      |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 251.19    | 408.45            | 411.03    | 511.03    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.54      | 4.49              | 4.49      | 5.29      |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 73.54     | 93.30             | 93.31     | 109.88    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 62.13     | 78.82             | 78.83     | 92.83     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.86     | 39.15             | 39.15     | 46.11     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12,348.45 | 15,901.23         | 15,909.44 | 18,807.00 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,049.61  | 1,566.38          | 1,573.15  | 1,923.22  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,049.61  | 1,566.38          | 1,573.15  | 1,923.22  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 12,360.07 | 15,915.97         | 15,924.17 | 18,824.35 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 12,359.18 | 15,914.84         | 15,923.04 | 18,823.02 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12,356.50 | 15,911.44         | 15,919.64 | 18,819.02 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12,358.26 | 15,913.67         | 15,921.88 | 18,821.65 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12,348.45 | 15,901.23         | 15,909.44 | 18,807.00 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,002.71  | 1,272.06          | 1,272.18  | 1,498.22  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 967.78    | 1,227.74          | 1,227.86  | 1,446.03  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 85.00     | 107.83            | 107.84    | 127.00    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 470.62    | 754.30            | 758.81    | 940.88    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 189.72    | 240.68            | 240.70    | 283.47    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 189.72    | 240.68            | 240.70    | 283.47    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 345.79    | 657.99            | 664.24    | 848.16    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 65.15     | 82.65             | 82.66     | 97.35     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 96.09     | 121.90            | 121.91    | 143.57    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2,877.08  | 3,649.88          | 3,650.24  | 4,298.79  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 348.20    | 441.73            | 441.77    | 520.26    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 92.08     | 116.81            | 116.82    | 137.58    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 35.81     | 45.43             | 45.44     | 53.51     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 72.16     | 134.49            | 135.71    | 172.73    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 334.41    | 424.24            | 424.28    | 499.66    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 28.38     | 36.00             | 36.00     | 42.40     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 82.88     | 105.14            | 105.15    | 123.83    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 742.66   | 968.49            | 969.33   | 1,149.47 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 852.21   | 1,107.53          | 1,108.39 | 1,313.26 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,000.69 | 1,295.95          | 1,296.82 | 1,535.18 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.57     | 5.80              | 5.80     | 6.83     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.57     | 5.80              | 5.80     | 6.83     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.57     | 5.80              | 5.80     | 6.83     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,318.81 | 1,673.06          | 1,673.22 | 1,970.52 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 948.54   | 1,203.34          | 1,203.45 | 1,417.28 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2,715.28 | 3,630.39          | 3,635.98 | 4,337.82 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 73.00    | 93.09             | 93.11    | 109.80   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 69.57    | 88.72             | 88.74    | 104.64   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 139.11   | 176.50            | 176.52   | 207.89   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 81.60    | 103.51            | 103.52   | 121.92   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 21.93    | 27.82             | 27.82    | 32.76    |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.46     | 5.65              | 5.65     | 6.66     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 25.76    | 32.67             | 32.68    | 38.48    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.23     | 0.29              | 0.29     | 0.34     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.23     | 0.29              | 0.29     | 0.34     |



**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|---|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 34.44     | 43.73             | 43.74     | 51.52     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 134.56    | 170.70            | 170.72    | 201.05    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.33      | 1.69              | 1.69      | 1.99      |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.70      | 11.04             | 11.04     | 13.00     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 17.03     | 21.60             | 21.60     | 25.44     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 147.50    | 187.13            | 187.14    | 220.39    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.69      | 9.75              | 9.75      | 11.49     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 63.32     | 80.32             | 80.33     | 94.60     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,473.66  | 1,870.13          | 1,870.33  | 2,202.82  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.74      | 3.47              | 3.47      | 4.09      |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 107.96    | 136.96            | 136.97    | 161.31    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 107.77    | 136.72            | 136.73    | 161.03    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.43     | 18.32             | 18.32     | 21.58     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 684.94    | 869.41            | 869.51    | 1,024.15  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.72     | 18.56             | 18.70     | 23.51     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 444.67    | 564.11            | 564.17    | 664.41    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12,720.04 | 16,228.28         | 16,232.44 | 19,144.02 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7,111.91  | 9,093.99          | 9,096.90  | 10,734.74 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12,770.04 | 16,291.84         | 16,296.01 | 19,218.92 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12,742.57 | 16,256.98         | 16,261.15 | 19,177.86 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12,720.04 | 16,228.28         | 16,232.44 | 19,144.02 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 45.11     | 57.36             | 57.36     | 67.59     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 38.53     | 48.88             | 48.89     | 57.57     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,284.58  | 1,629.84          | 1,630.00  | 1,919.67  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.86      | 1.09              | 1.09      | 1.28      |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 42.93     | 54.46             | 54.47     | 64.15     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 42.93     | 54.46             | 54.47     | 64.15     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.60     | 24.86             | 24.86     | 29.28     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 79.92     | 101.39            | 101.40    | 119.41    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 156.36    | 198.37            | 198.38    | 233.63    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 77.69     | 98.55             | 98.56     | 116.07    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 32.59     | 41.34             | 41.34     | 48.69     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.65      | 0.83              | 0.83      | 0.98      |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 64.45     | 81.77             | 81.77     | 96.30     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 125.42    | 178.16            | 178.72    | 216.19    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 873.69    | 1,204.20          | 1,207.02  | 1,450.26  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,841.62  | 5,206.43          | 5,216.33  | 6,243.16  |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,841.62 | 5,206.43          | 5,216.33 | 6,243.16 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5,927.96 | 7,853.19          | 7,863.34 | 9,360.48 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5,567.88 | 7,396.38          | 7,406.49 | 8,822.45 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,748.61 | 3,486.91          | 3,487.24 | 4,106.84 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,888.46 | 3,664.32          | 3,664.68 | 4,315.80 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,886.33 | 3,661.62          | 3,661.97 | 4,312.61 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.16     | 1.47              | 1.47     | 1.73     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 54.54    | 69.19             | 69.19    | 81.49    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 27.80    | 35.27             | 35.27    | 41.54    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 330.50   | 419.28            | 419.32   | 493.82   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.91    | 25.26             | 25.26    | 29.75    |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 131.87   | 167.40            | 167.42   | 197.20   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,550.79 | 1,968.81          | 1,969.05 | 2,319.33 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,550.79 | 1,968.81          | 1,969.05 | 2,319.33 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,411.97 | 1,792.69          | 1,792.91 | 2,111.90 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,411.97 | 1,792.69          | 1,792.91 | 2,111.90 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 24.42    | 30.98             | 30.99    | 36.49    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 924.66   | 1,174.41          | 1,174.56 | 1,383.67 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 579.06   | 735.61            | 735.71   | 866.73   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-----------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 772.81    | 980.39            | 980.48    | 1,154.69  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 75.96     | 96.36             | 96.37     | 113.49    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 756.14    | 960.01            | 960.13    | 1,130.95  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 54.38     | 69.00             | 69.01     | 81.27     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 313.52    | 397.74            | 397.78    | 468.46    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1,089.36  | 1,381.97          | 1,382.11  | 1,627.67  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,843.23  | 2,338.33          | 2,338.56  | 2,754.06  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.09      | 2.66              | 2.66      | 3.14      |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 344.24    | 436.73            | 436.77    | 514.38    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 344.24    | 436.73            | 436.77    | 514.38    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 344.24    | 436.73            | 436.77    | 514.38    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 249.92    | 317.04            | 317.08    | 373.41    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 38.77     | 49.18             | 49.19     | 57.93     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1,107.92  | 1,405.51          | 1,405.65  | 1,655.40  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 337.54    | 428.20            | 428.25    | 504.33    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 337.54    | 428.20            | 428.25    | 504.33    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 394.29    | 500.19            | 500.24    | 589.12    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 12,300.53 | 15,840.44         | 15,848.63 | 18,735.39 |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |          |                   |          |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,010.30 | 1,281.88          | 1,282.01 | 1,509.85 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 241.22   | 306.02            | 306.05   | 360.42   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 80.31    | 101.88            | 101.89   | 120.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 25.29    | 32.08             | 32.08    | 37.78    |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.69    | 30.06             | 30.06    | 35.40    |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,008.97 | 1,280.27          | 1,280.40 | 1,507.97 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 974.52   | 1,236.48          | 1,236.61 | 1,456.38 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,925.90 | 2,480.83          | 2,482.14 | 2,934.45 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,926.09 | 2,481.08          | 2,482.38 | 2,934.74 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,903.12 | 2,451.93          | 2,453.23 | 2,900.41 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 202.65   | 257.09            | 257.11   | 302.80   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 165.41   | 247.42            | 248.50   | 303.95   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,338.94 | 1,760.46          | 1,762.38 | 2,094.09 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 790.89   | 1,040.91          | 1,042.07 | 1,238.51 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 790.89   | 1,040.91          | 1,042.07 | 1,238.51 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 417.47   | 529.64            | 529.69   | 623.81   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2,639.61 | 3,348.93          | 3,349.26 | 3,944.43 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,643.41 | 3,353.75          | 3,354.09 | 3,950.11 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2,642.45 | 3,352.53          | 3,352.86 | 3,948.67 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,431.56 | 7,072.32          | 7,078.14 | 8,390.36 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,404.54 | 7,038.03          | 7,043.85 | 8,349.98 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5,431.56 | 7,072.32          | 7,078.14 | 8,390.36 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4,983.65 | 6,504.10          | 6,509.86 | 7,721.11 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3,496.25 | 4,445.13          | 4,445.84 | 5,238.68 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,496.25 | 4,445.13          | 4,445.84 | 5,238.68 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,496.25 | 4,445.13          | 4,445.84 | 5,238.68 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,495.74 | 4,444.48          | 4,445.19 | 5,237.92 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,495.74 | 4,444.48          | 4,445.19 | 5,237.92 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.85     | 14.03             | 14.14    | 17.88    |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.73     | 5.99              | 5.99     | 7.06     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.75     | 9.83              | 9.83     | 11.58    |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 38.53    | 48.88             | 48.89    | 57.57    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 721.92   | 915.97            | 916.07   | 1,078.87 |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 200.87   | 254.84            | 254.86   | 300.14   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2,163.28 | 2,744.34          | 2,744.61 | 3,232.26 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 343.54   | 435.81            | 435.85   | 513.29   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 99.20    | 125.84            | 125.85   | 148.22   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 99.20    | 125.84            | 125.85   | 148.22   |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
|   |                             | Moderate                                     |   |  |          |                   |          |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 20.83    | 26.42             | 26.42    | 31.12    |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 33.91    | 43.02             | 43.02    | 50.67    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 33.52    | 42.53             | 42.53    | 50.09    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 12.30    | 15.61             | 15.61    | 18.38    |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 390.70   | 495.64            | 495.69   | 583.76   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.81     | 12.44             | 12.44    | 14.66    |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 222.61   | 282.40            | 282.43   | 332.61   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 229.61   | 291.29            | 291.32   | 343.08   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 834.98   | 1,059.26          | 1,059.36 | 1,247.58 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 136.13   | 172.70            | 172.71   | 203.40   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 231.60   | 445.78            | 450.11   | 575.74   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 668.88   | 848.58            | 848.67   | 999.47   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2,586.02 | 3,503.29          | 3,509.92 | 4,200.43 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2,568.26 | 3,480.77          | 3,487.39 | 4,173.90 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2,568.26 | 3,480.77          | 3,487.39 | 4,173.90 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 168.42   | 213.66            | 213.68   | 251.64   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 54.51    | 69.16             | 69.16    | 81.45    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 102.62   | 135.14            | 135.29   | 160.82   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 102.62   | 135.14            | 135.29   | 160.82   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 102.62   | 135.14            | 135.29   | 160.82   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 276.28 | 350.65            | 350.69   | 413.05   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.58  | 18.27             | 18.30    | 21.87    |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 427.64 | 542.51            | 542.56   | 638.96   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.42  | 22.10             | 22.10    | 26.02    |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 106.11 | 134.61            | 134.63   | 158.55   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 26.31  | 33.37             | 33.37    | 39.30    |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 76.84  | 97.48             | 97.49    | 114.81   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 56.55  | 71.74             | 71.75    | 84.50    |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 793.17 | 1,163.51          | 1,168.06 | 1,422.86 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.04   | 5.12              | 5.12     | 6.03     |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 4.24   | 5.38              | 5.38     | 6.34     |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 70.55  | 89.50             | 89.51    | 105.41   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 667.64 | 846.98            | 847.06   | 997.56   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 32.08  | 40.69             | 40.70    | 47.93    |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 26.61  | 34.36             | 34.38    | 40.68    |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 313.52 | 397.74            | 397.78   | 468.46   |



**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 211.74   | 268.62            | 268.64   | 316.38   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 910.14   | 1,389.58          | 1,396.34 | 1,715.03 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 578.69   | 734.35            | 734.42   | 864.97   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 106.11   | 134.61            | 134.63   | 158.55   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.07     | 3.89              | 3.90     | 4.59     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 43.35    | 54.99             | 55.00    | 64.77    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 27.57    | 52.41             | 52.91    | 67.55    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 38.26    | 66.07             | 66.57    | 83.67    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 41.00    | 69.57             | 70.07    | 87.80    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 517.81   | 656.90            | 656.97   | 773.69   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,819.64 | 4,845.74          | 4,846.22 | 5,707.30 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3,812.56 | 4,836.76          | 4,837.23 | 5,696.72 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,753.41 | 4,761.72          | 4,762.19 | 5,608.34 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 247.26   | 313.67            | 313.70   | 369.44   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 78.73    | 99.88             | 99.89    | 117.64   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 101.99   | 140.85            | 141.19   | 169.72   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 69.59    | 88.28             | 88.29    | 103.98   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 245.66   | 354.60            | 355.84   | 431.97   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 245.66   | 354.60            | 355.84   | 431.97   |

**Table A-12. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|----------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 290.06 | 367.97            | 368.00 | 433.39   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 190.46 | 241.61            | 241.64 | 284.57   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 34.63  | 43.93             | 43.94  | 51.75    |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 90.51  | 114.83            | 114.84 | 135.24   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 376.83 | 478.05            | 478.10 | 563.04   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 290.27 | 368.23            | 368.27 | 433.70   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 722.69 | 916.81            | 916.90 | 1,079.81 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 150.30 | 190.67            | 190.69 | 224.57   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 127.31 | 161.50            | 161.52 | 190.22   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.20              | 0.21   | 0.25   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.69   | 0.88              | 0.94   | 1.12   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.46   | 0.59              | 0.61   | 0.72   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.24   | 0.31              | 0.32   | 0.39   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.19   | 0.25              | 0.25   | 0.30   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.23   | 0.30              | 0.31   | 0.36   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.30              | 0.31   | 0.36   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.05   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.26   | 1.62              | 1.72   | 2.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.16   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.27   | 0.32   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.25              | 0.25   | 0.30   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.42   | 3.11              | 3.22   | 3.81   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.13   | 2.74              | 2.82   | 3.34   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.42   | 3.11              | 3.23   | 3.82   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.24   | 0.28   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.96   | 1.24              | 1.26   | 1.49   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.95   | 1.22              | 1.24   | 1.46   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.96   | 1.24              | 1.26   | 1.49   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.63   | 0.81              | 0.89   | 1.07   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.63   | 0.81              | 0.89   | 1.07   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.49   | 0.63              | 0.70   | 0.84   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.19   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.25              | 0.29   | 0.35   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.20   | 0.24   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51   | 0.66              | 0.69   | 0.82   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.51   | 0.66              | 0.69   | 0.82   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.51   | 0.66              | 0.69   | 0.82   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.20              | 0.21   | 0.25   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.30   | 0.38              | 0.40   | 0.48   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.98   | 2.54              | 2.63   | 3.12   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.23   | 0.29              | 0.29   | 0.35   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.37   | 0.48              | 0.49   | 0.58   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.22   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.22   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.22   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.51   | 0.60   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.90   | 1.15              | 1.19   | 1.40   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.11              | 1.15   | 1.36   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.29              | 0.30   | 0.35   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.25   | 2.89              | 2.97   | 3.51   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.25   | 2.89              | 2.97   | 3.51   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.29   | 2.94              | 3.02   | 3.57   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.81   | 1.05              | 1.08   | 1.28   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.06              | 1.09   | 1.29   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.79   | 1.01              | 1.04   | 1.23   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.49   | 0.63              | 0.64   | 0.76   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.29   | 0.34   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.13              | 0.14   | 0.16   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.34   | 0.44              | 0.45   | 0.53   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.98   | 1.26              | 1.29   | 1.53   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.98   | 1.26              | 1.29   | 1.52   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.90   | 1.16              | 1.19   | 1.40   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.89   | 1.15              | 1.18   | 1.39   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.32              | 0.34   | 0.41   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.98              | 1.02   | 1.20   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.76   | 0.98              | 1.02   | 1.20   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.68   | 0.88              | 0.91   | 1.07   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.34              | 0.35   | 0.42   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.43              | 0.45   | 0.53   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.48   | 3.18              | 3.26   | 3.85   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.54   | 3.26              | 3.34   | 3.95   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.40   | 0.52              | 0.53   | 0.62   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.45              | 0.46   | 0.54   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.24   | 1.59              | 1.71   | 2.03   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.59   | 2.04              | 2.19   | 2.60   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.59   | 2.04              | 2.19   | 2.60   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.61   | 0.78              | 0.81   | 0.96   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.20   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.77   | 2.28              | 2.35   | 2.78   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.73   | 2.23              | 2.30   | 2.72   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.73   | 2.23              | 2.30   | 2.72   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.15   | 0.18   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.24              | 0.25   | 0.30   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |



**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.17   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.26   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.26   | 0.33              | 0.35   | 0.41   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.26   | 0.34              | 0.37   | 0.44   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.23              | 0.24   | 0.28   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.17   | 0.21              | 0.22   | 0.26   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.33   | 0.43              | 0.45   | 0.53   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.57   | 0.73              | 0.75   | 0.89   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.57   | 0.73              | 0.75   | 0.88   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.24   | 0.28   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.48   | 0.61              | 0.64   | 0.76   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.45              | 0.48   | 0.57   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.33   | 0.43              | 0.44   | 0.52   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.31   | 0.40              | 0.41   | 0.49   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.48   | 0.62              | 0.64   | 0.76   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.37   | 0.48              | 0.49   | 0.58   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 3.28   | 4.22              | 4.59   | 5.48   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.28   | 4.22              | 4.59   | 5.48   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.24   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.22   | 0.29              | 0.31   | 0.37   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.87   | 1.11              | 1.15   | 1.36   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.66   | 0.85              | 0.87   | 1.03   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.27   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.11   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.33              | 0.35   | 0.41   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.95   | 1.22              | 1.31   | 1.57   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 0.67              | 0.71   | 0.84   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.37              | 0.39   | 0.46   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.39   | 0.51              | 0.53   | 0.63   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.51              | 0.53   | 0.63   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.30              | 0.33   | 0.39   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.22              | 0.25   | 0.30   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.32              | 0.33   | 0.40   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.49   | 0.63              | 0.64   | 0.75   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.50   | 0.64              | 0.65   | 0.76   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.20   | 0.24   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.09   | 0.11   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.16   | 0.19   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.57   | 5.87              | 5.94   | 7.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.46   | 0.59              | 0.63   | 0.75   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.46   | 0.59              | 0.63   | 0.75   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.58   | 5.88              | 5.95   | 7.01   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 4.58   | 5.88              | 5.95   | 7.01   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.58   | 5.88              | 5.95   | 7.01   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.58   | 5.88              | 5.95   | 7.01   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.57   | 5.87              | 5.94   | 7.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.60              | 0.62   | 0.74   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.45   | 0.58              | 0.61   | 0.72   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.25   | 0.30   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.10   | 1.42              | 1.44   | 1.69   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.24   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.26   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.34   | 0.43              | 0.45   | 0.54   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.43   | 0.55              | 0.58   | 0.69   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.67              | 0.71   | 0.84   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.70              | 0.72   | 0.85   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.51              | 0.52   | 0.61   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.30   | 1.68              | 1.77   | 2.10   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.60   | 0.77              | 0.79   | 0.93   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.40   | 0.47   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.25              | 0.26   | 0.31   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.34   | 6.86              | 7.04   | 8.32   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2.97   | 3.82              | 3.92   | 4.64   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.33   | 6.84              | 7.02   | 8.30   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.31   | 6.82              | 7.00   | 8.27   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.34   | 6.86              | 7.04   | 8.32   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.65   | 0.84              | 0.88   | 1.05   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.36   | 0.46              | 0.49   | 0.58   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.59   | 2.04              | 2.13   | 2.52   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.59   | 2.04              | 2.13   | 2.52   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.43   | 3.12              | 3.23   | 3.82   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.28   | 2.93              | 3.03   | 3.59   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.05   | 1.35              | 1.37   | 1.61   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.11   | 1.43              | 1.44   | 1.70   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.11   | 1.42              | 1.44   | 1.70   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.26   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.11   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.74   | 0.95              | 0.99   | 1.18   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.74   | 0.95              | 0.99   | 1.18   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.63   | 0.81              | 0.84   | 0.99   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.63   | 0.81              | 0.84   | 0.99   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.37   | 0.48              | 0.49   | 0.58   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.25   | 0.33              | 0.34   | 0.40   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.34   | 0.43              | 0.45   | 0.53   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.36   | 0.46              | 0.48   | 0.57   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.18   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.49   | 0.63              | 0.65   | 0.77   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.77   | 0.99              | 1.02   | 1.20   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.16   | 0.20              | 0.21   | 0.24   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.20              | 0.21   | 0.24   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.24   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.52   | 0.67              | 0.69   | 0.82   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 4.55   | 5.85              | 5.92   | 6.97   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.58              | 0.60   | 0.71   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.41   | 0.53              | 0.53   | 0.63   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.36   | 0.46              | 0.47   | 0.55   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.72   | 0.93              | 0.94   | 1.11   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.72   | 0.93              | 0.94   | 1.11   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.71   | 0.91              | 0.92   | 1.09   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.11   | 0.13   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.58   | 0.75              | 0.78   | 0.93   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.43              | 0.44   | 0.53   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.33   | 0.43              | 0.44   | 0.53   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.29   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.10   | 1.42              | 1.45   | 1.72   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.11   | 1.42              | 1.46   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.10   | 1.42              | 1.46   | 1.72   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.04   | 2.62              | 2.66   | 3.14   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.03   | 2.61              | 2.65   | 3.13   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.04   | 2.62              | 2.66   | 3.14   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.87   | 2.40              | 2.44   | 2.88   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1.33   | 1.71              | 1.73   | 2.04   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.33   | 1.71              | 1.73   | 2.04   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.33   | 1.71              | 1.73   | 2.04   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.33   | 1.71              | 1.73   | 2.04   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.33   | 1.71              | 1.73   | 2.04   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.34   | 0.43              | 0.45   | 0.53   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.10              | 0.11   | 0.13   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1.04   | 1.34              | 1.40   | 1.66   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.27   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.27   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.16   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.48              | 0.50   | 0.59   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.04   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.52   | 0.67              | 0.72   | 0.86   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.46   | 1.88              | 2.02   | 2.41   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.45   | 1.87              | 2.01   | 2.40   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.45   | 1.87              | 2.01   | 2.40   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.05   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.26              | 0.28   | 0.33   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.05   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.39              | 0.41   | 0.49   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.04   | 0.04   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.42              | 0.44   | 0.52   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.18   |



**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.15   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.39   | 0.50              | 0.54   | 0.64   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.21   | 0.27              | 0.28   | 0.33   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.26              | 0.27   | 0.31   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.54   | 1.98              | 2.01   | 2.38   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.53   | 1.97              | 2.01   | 2.37   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.51   | 1.94              | 1.98   | 2.34   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |

**Table A-13. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.19   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.20   | 0.26              | 0.28   | 0.33   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.23   | 0.27   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.30   | 0.39              | 0.40   | 0.47   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.08              | 0.09   | 0.11   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.07   | 13.74             | 15.27  | 20.58  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 42.64  | 64.32             | 70.91  | 95.41  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.45  | 49.83             | 53.84  | 72.08  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 16.74  | 25.03             | 27.21  | 36.49  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.74   | 8.52              | 9.16   | 12.26  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.97   | 2.94              | 3.18   | 4.26   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.61   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.86   | 2.77              | 3.00   | 4.01   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.37  | 21.36             | 23.00  | 30.77  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.74  | 26.34             | 28.29  | 37.82  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 17.74  | 26.34             | 28.29  | 37.82  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.41   | 5.06              | 5.44   | 7.27   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.23   | 4.77              | 5.08   | 6.77   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.49   | 5.39              | 6.15   | 8.34   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.33              | 0.37   | 0.51   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.94   | 2.94              | 3.27   | 4.41   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.94   | 10.42             | 11.39  | 15.29  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 81.41  | 122.44            | 134.35 | 180.55 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.35   | 0.47   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.86   | 8.89              | 9.88   | 13.32  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.04   | 3.13              | 3.54   | 4.80   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.69  | 23.29             | 25.02  | 33.45  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.60  | 23.08             | 24.63  | 32.87  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.61   | 0.91              | 0.99   | 1.32   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.52              | 0.55   | 0.74   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 176.64 | 263.15            | 284.29 | 380.62 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 159.47 | 237.14            | 255.43 | 341.72 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 176.80 | 263.38            | 284.55 | 380.97 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.35   | 2.00              | 2.13   | 2.85   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.10  | 19.51             | 21.06  | 28.19  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.45              | 0.49   | 0.66   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 75.99  | 112.58            | 120.50 | 160.97 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 74.84  | 110.87            | 118.67 | 158.52 |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 75.99  | 112.58            | 120.50 | 160.97 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 30.49  | 47.10             | 53.87  | 73.10  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.49  | 47.10             | 53.87  | 73.10  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 21.70  | 33.85             | 39.28  | 53.49  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.37   | 0.55              | 0.59   | 0.79   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.31   | 1.99              | 2.20   | 2.96   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.15   | 12.20             | 13.27  | 17.80  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.69   | 1.03              | 1.12   | 1.50   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.76   | 9.49              | 11.86  | 16.41  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.83   | 4.93              | 6.60   | 9.26   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.43  | 51.60             | 56.29  | 75.54  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 34.49  | 51.69             | 56.39  | 75.68  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 34.49  | 51.69             | 56.39  | 75.68  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.07   | 13.74             | 15.27  | 20.58  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.47              | 0.52   | 0.70   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 20.01  | 30.00             | 32.76  | 43.97  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 143.35 | 213.65            | 230.99 | 309.32 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 19.14  | 28.24             | 30.03  | 40.05  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.74   | 1.27              | 1.67   | 2.34   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 26.84  | 40.00             | 43.26  | 57.93  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.34   | 0.45   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.51   | 2.24              | 2.38   | 3.18   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.93   | 1.38              | 1.49   | 1.99   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.05  | 14.97             | 16.17  | 21.64  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.05  | 14.97             | 16.17  | 21.64  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.05  | 14.97             | 16.17  | 21.64  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.49   | 2.23              | 2.41   | 3.23   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.34   | 7.86              | 8.33   | 11.10  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.64              | 0.69   | 0.93   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.44   | 14.03             | 15.09  | 20.18  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.44   | 14.03             | 15.09  | 20.18  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.44   | 14.03             | 15.09  | 20.18  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 31.79  | 47.01             | 50.19  | 66.99  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 67.58  | 100.47            | 108.17 | 144.71 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 65.42  | 97.25             | 104.70 | 140.05 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.86  | 23.67             | 25.65  | 34.37  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 170.31 | 253.03            | 272.14 | 363.95 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 170.31 | 253.03            | 272.14 | 363.95 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 173.49 | 257.74            | 277.16 | 370.65 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.94   | 7.31              | 7.80   | 10.42  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.15   | 3.18              | 3.39   | 4.53   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.94   | 7.31              | 7.80   | 10.42  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.88   | 7.21              | 7.71   | 10.29  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 60.78  | 90.40             | 97.39  | 130.31 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.48  | 91.45             | 98.53  | 131.84 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 58.72  | 87.32             | 94.06  | 125.84 |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 39.62  | 58.63             | 62.63  | 83.62  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.02  | 15.43             | 17.58  | 23.84  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 7.02   | 10.50             | 11.42  | 15.31  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 24.70  | 36.79             | 39.76  | 53.23  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 75.73  | 112.37            | 120.61 | 161.21 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 75.66  | 112.26            | 120.49 | 161.05 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 69.68  | 103.39            | 110.97 | 148.33 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 69.00  | 102.39            | 109.89 | 146.89 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.08   | 1.62              | 1.75   | 2.34   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.29  | 23.09             | 25.51  | 34.35  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 55.11  | 82.16             | 88.85  | 118.99 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 55.11  | 82.16             | 88.85  | 118.99 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 49.61  | 73.91             | 79.87  | 106.94 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.81   | 2.68              | 2.87   | 3.84   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.21   | 3.28              | 3.52   | 4.70   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.98  | 28.28             | 30.56  | 40.92  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 24.60  | 36.65             | 39.60  | 53.02  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 191.47 | 284.08            | 304.84 | 407.46 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 195.64 | 290.33            | 311.66 | 416.61 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.97  | 47.35             | 50.65  | 67.64  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 27.77  | 41.14             | 44.04  | 58.83  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 73.34  | 111.10            | 123.30 | 166.15 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 95.24  | 144.12            | 159.67 | 215.08 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 95.24  | 144.12            | 159.67 | 215.08 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.76  | 63.70             | 68.82  | 92.13  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.17   | 12.32             | 13.59  | 18.28  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 131.77 | 196.04            | 211.32 | 282.77 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 129.00 | 191.91            | 206.85 | 276.78 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 129.00 | 191.91            | 206.85 | 276.78 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.47              | 0.53   | 0.71   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.80   | 1.19              | 1.27   | 1.69   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.91   | 1.35              | 1.47   | 1.96   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.30   | 0.45              | 0.48   | 0.64   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.46   | 5.30              | 5.99   | 8.10   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.49   | 4.24              | 5.53   | 7.72   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.40   | 2.22              | 2.66   | 3.64   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 11.87  | 17.83             | 19.51  | 26.20  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.05   | 1.69              | 2.04   | 2.80   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.25   | 9.27              | 9.93   | 13.26  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.11              | 0.12   | 0.16   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.82   | 8.66              | 9.33   | 12.48  |



**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 7.73   | 11.54             | 12.51  | 16.76  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 10.35  | 15.57             | 17.10  | 22.98  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.67   | 1.06              | 1.26   | 1.73   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 1.34   | 2.07              | 2.39   | 3.25   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.12   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.08   | 1.64              | 1.83   | 2.46   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.21              | 0.23   | 0.31   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 18.23  | 27.24             | 29.56  | 39.63  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.32   | 4.99              | 5.48   | 7.37   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 14.03  | 21.44             | 24.13  | 32.63  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 5.30   | 7.85              | 8.40   | 11.21  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 12.36  | 18.47             | 20.06  | 26.89  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.59   | 0.87              | 0.92   | 1.23   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.04   | 1.54              | 1.67   | 2.23   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 13.82  | 20.40             | 21.71  | 28.96  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 24.41  | 36.36             | 39.29  | 52.60  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.14   | 1.70              | 1.84   | 2.46   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.43   | 0.76              | 1.01   | 1.42   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 43.42  | 64.46             | 69.26  | 92.60  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 43.38  | 64.41             | 69.21  | 92.53  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 10.81  | 16.30             | 17.95  | 24.14  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.31   | 2.00              | 2.24   | 3.03   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.09   | 3.22              | 3.66   | 4.97   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 32.34  | 48.43             | 52.77  | 70.79  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 22.84  | 34.34             | 37.66  | 50.61  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.65              | 0.75   | 1.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.68              | 0.79   | 1.07   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.07   | 4.59              | 4.99   | 6.69   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 25.07  | 37.25             | 40.07  | 53.60  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.57  | 35.03             | 37.70  | 50.43  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 33.89  | 50.61             | 54.89  | 73.56  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 28.80  | 42.74             | 45.90  | 61.36  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.18   | 0.24   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.13   | 0.18   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.13   | 0.18   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.96   | 8.84              | 9.48   | 12.67  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.47   | 0.73              | 0.83   | 1.12   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 175.13 | 267.82            | 301.70 | 408.01 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.03 | 267.67            | 301.54 | 407.78 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.45   | 2.18              | 2.39   | 3.22   |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.87   | 10.63             | 12.18  | 16.53  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 11.73  | 17.96             | 20.27  | 27.43  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.97   | 1.46              | 1.60   | 2.15   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 5.21   | 7.71              | 8.22   | 10.97  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 6.42   | 9.48              | 10.12  | 13.50  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 6.42   | 9.48              | 10.12  | 13.50  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 6.36   | 9.40              | 10.03  | 13.39  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.38   | 2.20              | 2.63   | 3.61   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.33   | 3.44              | 3.67   | 4.89   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 65.18  | 96.89             | 104.31 | 139.53 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 50.14  | 74.49             | 80.11  | 107.14 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 12.58  | 18.70             | 20.13  | 26.92  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.28              | 0.30   | 0.40   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.08   | 4.68              | 5.22   | 7.05   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.51   | 2.27              | 2.51   | 3.37   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 5.00   | 7.49              | 8.16   | 10.94  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.98   | 7.39              | 7.92   | 10.58  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 4.98   | 7.39              | 7.92   | 10.58  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.57   | 2.39              | 2.68   | 3.62   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.97   | 5.93              | 6.42   | 8.61   |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.76   | 2.68              | 2.99   | 4.04   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.22              | 0.25   | 0.33   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.94   | 4.37              | 4.71   | 6.29   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.20   | 4.76              | 5.12   | 6.85   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.20   | 4.76              | 5.12   | 6.85   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.14   | 1.70              | 1.84   | 2.46   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.40              | 0.45   | 0.61   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.60  | 27.74             | 30.04  | 40.25  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 54.95  | 83.40             | 92.86  | 125.23 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.57   | 5.27              | 5.61   | 7.49   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.90   | 4.45              | 5.03   | 6.81   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.90   | 4.45              | 5.03   | 6.81   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.59   | 0.88              | 0.94   | 1.25   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.85              | 0.92   | 1.24   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.36              | 0.40   | 0.53   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.77   | 2.65              | 2.88   | 3.86   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.76   | 2.62              | 2.85   | 3.82   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.92   | 2.87              | 3.12   | 4.18   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.35  | 51.59             | 56.48  | 75.86  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 20.19  | 30.16             | 32.73  | 43.88  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 26.81  | 40.14             | 43.74  | 58.69  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.81  | 40.14             | 43.74  | 58.69  |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.88   | 8.79              | 9.54   | 12.79  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.92   | 2.87              | 3.12   | 4.18   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.22              | 0.24   | 0.31   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.80   | 10.05             | 10.73  | 14.31  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.80  | 16.72             | 19.17  | 26.04  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.98   | 1.45              | 1.55   | 2.07   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.95   | 10.93             | 12.85  | 17.54  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.48   | 0.71              | 0.76   | 1.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.40              | 0.42   | 0.56   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.74   | 1.09              | 1.16   | 1.54   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 13.04  | 19.29             | 20.58  | 27.47  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.04  | 19.29             | 20.58  | 27.47  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.04  | 19.29             | 20.58  | 27.47  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.04  | 19.29             | 20.58  | 27.47  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.82   | 8.66              | 9.33   | 12.48  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.22  | 25.75             | 27.99  | 37.53  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 39.52  | 58.48             | 62.47  | 83.41  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 40.01  | 59.20             | 63.24  | 84.43  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.33              | 1.42   | 1.90   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.86   | 4.98              | 6.67   | 9.35   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.10   | 6.19              | 6.83   | 9.20   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.34   | 0.51              | 0.56   | 0.76   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.61   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.61   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.26   | 8.15              | 9.36   | 12.71  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.25              | 0.28   | 0.38   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.46   | 3.67              | 3.99   | 5.35   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.16   | 3.28              | 3.64   | 4.90   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.17   | 1.74              | 1.87   | 2.50   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 375.29 | 554.67            | 591.36 | 789.14 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 27.04  | 40.92             | 45.33  | 61.06  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 27.04  | 40.92             | 45.33  | 61.06  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 375.59 | 555.11            | 591.83 | 789.77 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 375.56 | 555.06            | 591.77 | 789.69 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 375.50 | 554.98            | 591.68 | 789.58 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 375.54 | 555.03            | 591.74 | 789.65 |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 375.29 | 554.67            | 591.36 | 789.14 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 33.28  | 49.66             | 53.81  | 72.09  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 32.20  | 48.07             | 52.12  | 69.85  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.73   | 4.09              | 4.45   | 5.96   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.87   | 15.02             | 16.81  | 22.70  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.85   | 10.36             | 11.47  | 15.45  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.85   | 10.36             | 11.47  | 15.45  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.61   | 4.24              | 5.22   | 7.19   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.16   | 3.18              | 3.38   | 4.50   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.00   | 4.43              | 4.73   | 6.30   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 90.42  | 133.63            | 142.47 | 190.12 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.60  | 17.25             | 18.57  | 24.84  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.87   | 4.24              | 4.51   | 6.02   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.11   | 1.64              | 1.74   | 2.33   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.43   | 0.66              | 0.76   | 1.03   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.26  | 16.84             | 18.31  | 24.56  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.49              | 1.64   | 2.20   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.57   | 3.84              | 4.19   | 5.62   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 23.59  | 35.24             | 38.26  | 51.29  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 28.12  | 42.23             | 46.24  | 62.10  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 33.53  | 50.44             | 55.38  | 74.44  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.53              | 0.58   | 0.78   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.53              | 0.58   | 0.78   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.35   | 0.53              | 0.58   | 0.78   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 42.25  | 62.68             | 67.25  | 89.87  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.43  | 45.14             | 48.45  | 64.76  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 84.75  | 127.38            | 139.61 | 187.57 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.62   | 3.96              | 4.39   | 5.92   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.51   | 3.80              | 4.21   | 5.68   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.97   | 7.35              | 7.86   | 10.50  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.47   | 3.68              | 3.98   | 5.33   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.64   | 0.95              | 1.00   | 1.34   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.25   | 0.34   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.91   | 1.34              | 1.43   | 1.91   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.03   | 0.04              | 0.05   | 0.07   |



**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.98   | 1.45              | 1.54   | 2.06   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.93   | 7.47              | 8.30   | 11.19  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.16   | 0.22   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.55              | 0.62   | 0.85   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.67   | 1.03              | 1.18   | 1.61   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.03   | 7.54              | 8.22   | 11.03  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.33              | 0.36   | 0.49   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.86   | 2.74              | 2.91   | 3.88   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.06  | 69.76             | 74.77  | 99.91  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.26              | 0.30   | 0.40   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.64   | 5.36              | 5.69   | 7.59   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.61   | 5.33              | 5.66   | 7.55   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.53   | 0.79              | 0.85   | 1.14   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.28  | 33.14             | 35.70  | 47.77  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.33              | 0.39   | 0.53   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 14.51  | 21.60             | 23.29  | 31.17  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 406.24 | 603.36            | 648.59 | 867.30 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 225.87 | 335.52            | 360.77 | 482.45 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 407.12 | 604.50            | 649.50 | 868.40 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 405.86 | 602.62            | 647.47 | 865.69 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 406.24 | 603.36            | 648.59 | 867.30 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.34   | 1.98              | 2.10   | 2.80   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.19   | 1.78              | 1.92   | 2.57   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 43.72  | 65.55             | 71.56  | 96.06  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.43   | 2.13              | 2.29   | 3.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.43   | 2.13              | 2.29   | 3.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 1.20              | 1.33   | 1.79   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.87   | 4.33              | 4.77   | 6.41   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.21   | 7.79              | 8.45   | 11.32  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.71   | 4.08              | 4.48   | 6.02   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.98   | 1.44              | 1.53   | 2.03   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.12   | 3.13              | 3.33   | 4.45   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.65   | 3.97              | 4.31   | 5.77   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 24.85  | 37.19             | 40.46  | 54.27  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 112.20 | 167.54            | 181.72 | 243.53 |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 112.20 | 167.54             | 181.72 | 243.53 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 178.40 | 265.63             | 286.75 | 383.84 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 166.70 | 248.31             | 268.20 | 359.05 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 86.48  | 127.78             | 136.17 | 181.69 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 90.81  | 134.21             | 143.08 | 190.93 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 90.74  | 134.11             | 142.97 | 190.79 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.28               | 0.35   | 0.48   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03               | 0.03   | 0.04   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 2.46               | 2.68   | 3.59   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 1.10               | 1.19   | 1.60   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.85  | 16.27              | 17.78  | 23.87  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.67   | 0.99               | 1.08   | 1.45   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.08   | 7.56               | 8.18   | 10.95  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 51.81  | 77.41              | 84.04  | 112.66 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 51.81  | 77.41              | 84.04  | 112.66 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 46.17  | 68.75              | 74.24  | 99.38  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.17  | 68.75              | 74.24  | 99.38  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.87   | 1.32               | 1.46   | 1.96   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 29.23  | 43.33              | 46.42  | 62.03  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 18.88  | 28.09              | 30.28  | 40.52  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 25.15  | 37.41             | 40.30  | 53.92  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.55   | 3.86              | 4.25   | 5.72   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 25.26  | 37.74             | 40.99  | 54.95  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.81   | 2.68              | 2.86   | 3.81   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 9.85   | 14.56             | 15.52  | 20.71  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.46   | 0.69              | 0.75   | 1.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 35.77  | 53.29             | 57.56  | 77.06  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 59.23  | 87.92             | 94.43  | 126.24 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.17   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 11.31  | 16.85             | 18.21  | 24.38  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 11.31  | 16.85             | 18.21  | 24.38  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.31  | 16.85             | 18.21  | 24.38  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 8.62   | 12.87             | 13.94  | 18.68  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.12   | 1.73              | 1.95   | 2.64   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 36.81  | 54.94             | 59.54  | 79.78  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 11.07  | 16.31             | 17.32  | 23.08  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 11.07  | 16.31             | 17.32  | 23.08  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 12.93  | 19.05             | 20.22  | 26.96  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 373.68 | 552.30            | 588.84 | 785.79 |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.11  | 49.31             | 53.24  | 71.27  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.91   | 11.78             | 12.72  | 17.03  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.88   | 4.35              | 4.81   | 6.48   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.42   | 0.64              | 0.70   | 0.94   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 1.20              | 1.30   | 1.75   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 33.29  | 49.19             | 52.42  | 69.95  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 30.33  | 44.75             | 47.58  | 63.46  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 58.74  | 86.86             | 92.69  | 123.72 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 58.76  | 86.89             | 92.72  | 123.76 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.73  | 85.37             | 91.10  | 121.59 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.39   | 9.52              | 10.28  | 13.76  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.58   | 6.94              | 7.72   | 10.41  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 41.46  | 61.90             | 67.10  | 89.91  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 24.27  | 36.16             | 39.09  | 52.34  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 24.27  | 36.16             | 39.09  | 52.34  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 15.01  | 22.15             | 23.55  | 31.41  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 84.82  | 125.90            | 135.19 | 180.73 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 85.03  | 126.22            | 135.53 | 181.19 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 84.90  | 126.02            | 135.32 | 180.91 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 163.36 | 241.79            | 258.42 | 345.06 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 162.54 | 240.59            | 257.14 | 343.35 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 163.36 | 241.79            | 258.42 | 345.06 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 149.49 | 221.29            | 236.57 | 315.91 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 108.70 | 160.72            | 171.47 | 228.86 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 108.70 | 160.72            | 171.47 | 228.86 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 108.70 | 160.72            | 171.47 | 228.86 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 108.67 | 160.68            | 171.42 | 228.80 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 108.67 | 160.68            | 171.42 | 228.80 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.21              | 0.24   | 0.33   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.34              | 0.37   | 0.50   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.36              | 0.38   | 0.51   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.19   | 1.78              | 1.92   | 2.57   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 23.95  | 35.74             | 38.72  | 51.88  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.39   | 9.47              | 10.15  | 13.57  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 72.59  | 108.50            | 117.84 | 157.98 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.78  | 17.62             | 19.14  | 25.66  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.56   | 5.37              | 5.94   | 7.99   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 3.56   | 5.37              | 5.94   | 7.99   |

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.76   | 1.16              | 1.30   | 1.75   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.10   | 1.63              | 1.75   | 2.35   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.04   | 1.54              | 1.65   | 2.21   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.45   | 0.68              | 0.73   | 0.97   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 12.73  | 18.94             | 20.41  | 27.32  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.32   | 0.49              | 0.54   | 0.73   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 7.48   | 11.14             | 12.01  | 16.08  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 7.71   | 11.47             | 12.37  | 16.56  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 27.45  | 40.90             | 44.19  | 59.17  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 4.16   | 6.20              | 6.69   | 8.95   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.87   | 1.39              | 1.68   | 2.30   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 27.13  | 41.51             | 46.81  | 63.32  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 84.07  | 127.66            | 142.23 | 191.84 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 83.51  | 126.82            | 141.33 | 190.65 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 83.51  | 126.82            | 141.33 | 190.65 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 5.34   | 7.91              | 8.46   | 11.30  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.89   | 2.88              | 3.22   | 4.34   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.68   | 5.62              | 6.31   | 8.53   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.68   | 5.62              | 6.31   | 8.53   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 3.68   | 5.62              | 6.31   | 8.53   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.07   | 13.39             | 14.25  | 19.01  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.62   | 0.95              | 1.07   | 1.44   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 14.32  | 21.40             | 23.25  | 31.16  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.55   | 0.80              | 0.85   | 1.14   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.92   | 5.95              | 6.62   | 8.93   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.66   | 2.53              | 2.81   | 3.79   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.58   | 3.84              | 4.13   | 5.52   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.27   | 3.49              | 3.96   | 5.36   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 19.66  | 29.54             | 32.36  | 43.47  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.19   | 0.25   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.13   | 0.20              | 0.21   | 0.28   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.16   | 3.20              | 3.43   | 4.59   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.13              | 0.17   | 0.23   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.47  | 33.63             | 36.61  | 49.10  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.75   | 1.12              | 1.23   | 1.65   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.46   | 2.34              | 2.81   | 3.85   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.85   | 14.56             | 15.52  | 20.72  |



**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.93   | 10.30             | 11.11  | 14.87  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 21.69  | 33.01             | 36.91  | 49.83  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 17.99  | 26.54             | 28.21  | 37.62  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.56   | 0.85              | 0.93   | 1.25   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.92   | 5.95              | 6.62   | 8.93   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.19              | 0.21   | 0.29   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.49   | 2.22              | 2.42   | 3.24   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.25              | 0.28   | 0.39   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.74              | 0.81   | 1.09   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.60   | 0.90              | 0.98   | 1.32   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 16.37  | 24.22             | 25.87  | 34.54  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 121.51 | 180.01            | 192.68 | 257.38 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 121.27 | 179.66            | 192.30 | 256.87 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 119.41 | 176.91            | 189.36 | 252.95 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 8.56   | 12.77             | 13.83  | 18.54  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.63   | 3.96              | 4.37   | 5.88   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.52   | 3.93              | 4.55   | 6.19   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.22   | 3.34              | 3.65   | 4.90   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.59   | 9.95              | 10.99  | 14.79  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.59   | 9.95              | 10.99  | 14.79  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-14. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.33   | 13.84             | 14.85  | 19.84  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.74   | 8.53              | 9.20   | 12.31  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.08   | 1.63              | 1.80   | 2.42   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 3.16   | 4.77              | 5.25   | 7.06   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 13.12  | 19.73             | 21.64  | 29.09  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 10.32  | 15.58             | 17.18  | 23.12  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 23.28  | 34.57             | 37.14  | 49.66  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 4.70   | 6.94              | 7.41   | 9.89   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 4.40   | 6.59              | 7.18   | 9.64   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 27.89  | 41.69             | 42.62  | 53.15  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 130.87 | 193.06            | 197.04 | 245.14 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 103.15 | 146.87            | 149.21 | 184.44 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 51.54  | 74.19             | 75.48  | 93.49  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.71  | 25.01             | 25.38  | 31.33  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.52   | 9.31              | 9.46   | 11.69  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.72   | 1.05              | 1.07   | 1.33   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.85   | 6.93              | 7.04   | 8.71   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 44.35  | 62.77             | 63.72  | 78.68  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 54.79  | 77.22             | 78.35  | 96.66  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 54.79  | 77.22             | 78.35  | 96.66  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 10.54  | 14.85             | 15.06  | 18.58  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.01  | 13.87             | 14.04  | 17.26  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 10.41  | 16.35             | 16.81  | 21.14  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.63   | 0.99              | 1.02   | 1.28   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.95   | 8.91              | 9.11   | 11.36  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.35  | 31.02             | 31.60  | 39.21  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 250.17 | 365.90            | 373.03 | 463.39 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61   | 0.88              | 0.89   | 1.10   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.95  | 26.87             | 27.47  | 34.27  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.22   | 9.62              | 9.87   | 12.38  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 48.47  | 68.32             | 69.32  | 85.53  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 48.26  | 67.27             | 68.15  | 83.90  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.89   | 2.69              | 2.74   | 3.38   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.40              | 0.40   | 0.50   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.16   | 1.61              | 1.63   | 2.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 544.79 | 775.52            | 787.88 | 973.86 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 492.18 | 696.99            | 707.62 | 873.80 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 545.25 | 776.20            | 788.58 | 974.73 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.17   | 5.80              | 5.88   | 7.23   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 40.55  | 57.65             | 58.56  | 72.36  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.98   | 1.40              | 1.43   | 1.77   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 234.92 | 329.10            | 333.65 | 411.15 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 231.42 | 324.19            | 328.67 | 405.01 |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 234.92 | 329.10            | 333.65 | 411.15 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 92.71  | 146.11            | 150.30 | 189.12 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 92.71  | 146.11            | 150.30 | 189.12 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 65.70  | 106.40            | 109.80 | 138.76 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.19   | 1.67              | 1.69   | 2.09   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.03   | 5.97              | 6.10   | 7.60   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.10  | 36.17             | 36.81  | 45.60  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.13   | 3.06              | 3.11   | 3.85   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.89  | 31.62             | 33.13  | 42.74  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.15   | 17.65             | 18.74  | 24.59  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 105.95 | 153.40            | 156.18 | 193.66 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 106.09 | 153.60            | 156.40 | 193.92 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 106.09 | 153.60            | 156.40 | 193.92 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 27.89  | 41.69             | 42.62  | 53.15  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.01   | 1.52              | 1.56   | 1.95   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 62.10  | 90.04             | 91.69  | 113.73 |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 442.30 | 630.48            | 640.64 | 792.07 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 59.28  | 82.10             | 83.11  | 102.19 |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.08   | 4.35              | 4.60   | 6.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 82.74  | 117.97            | 119.87 | 148.21 |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.58   | 0.81              | 0.82   | 1.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.68   | 6.50              | 6.59   | 8.10   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.91   | 4.13              | 4.20   | 5.19   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.99  | 44.10             | 44.80  | 55.37  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 30.99  | 44.10             | 44.80  | 55.37  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 30.99  | 44.10             | 44.80  | 55.37  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.61   | 6.57              | 6.68   | 8.26   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 16.52  | 22.77             | 23.03  | 28.29  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.95   | 1.36              | 1.38   | 1.70   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.14  | 41.18             | 41.80  | 51.59  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 29.14  | 41.18             | 41.80  | 51.59  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 29.14  | 41.18             | 41.80  | 51.59  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 98.31  | 137.09            | 138.90 | 171.01 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 209.17 | 296.02            | 300.51 | 371.04 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 202.75 | 286.88            | 291.23 | 359.56 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 48.89  | 69.96             | 71.12  | 87.99  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 526.11 | 743.13            | 754.21 | 930.87 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 526.11 | 743.13            | 754.21 | 930.87 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 536.00 | 756.91            | 768.17 | 948.06 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.27  | 21.31             | 21.60  | 26.60  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.07   | 9.86              | 9.99   | 12.31  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.27  | 21.31             | 21.60  | 26.60  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 15.13  | 21.11             | 21.39  | 26.35  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 187.65 | 265.85            | 269.93 | 333.35 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 189.73 | 268.85            | 272.98 | 337.12 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 181.23 | 256.66            | 260.58 | 321.77 |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 122.77 | 171.41            | 173.70 | 213.91   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.49  | 47.71             | 49.04  | 61.64    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 21.62  | 31.12             | 31.66  | 39.22    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 76.25  | 108.58            | 110.32 | 136.37   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 234.01 | 329.35            | 334.10 | 412.07   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 233.79 | 329.03            | 333.77 | 411.67   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 215.20 | 302.87            | 307.25 | 378.95   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 213.20 | 300.09            | 304.43 | 375.49   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.31   | 4.73              | 4.81   | 5.95     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 47.06  | 69.68             | 71.14  | 88.57    |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 169.93 | 242.35            | 246.28 | 304.52   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 169.93 | 242.35            | 246.28 | 304.52   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 152.96 | 217.84            | 221.32 | 273.59   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.60   | 7.85              | 7.96   | 9.81     |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.29   | 8.83              | 8.95   | 11.03    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 57.48  | 81.85             | 83.15  | 102.79   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 75.92  | 108.11            | 109.83 | 135.77   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 591.46 | 832.16            | 844.14 | 1,041.09 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 604.28 | 850.74            | 863.05 | 1,064.54 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 98.83  | 138.30            | 140.19 | 172.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 85.82  | 120.25            | 121.92 | 150.24 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 224.86 | 335.60            | 343.00 | 427.62 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 292.10 | 434.64            | 444.06 | 553.33 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 292.10 | 434.64            | 444.06 | 553.33 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 123.15 | 175.36            | 178.17 | 220.24 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 27.89  | 41.00             | 41.82  | 52.00  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 406.68 | 576.69            | 585.59 | 723.29 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 398.15 | 564.49            | 573.19 | 707.96 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 398.15 | 564.49            | 573.19 | 707.96 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.97   | 1.46              | 1.49   | 1.86   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.60   | 3.61              | 3.66   | 4.50   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.01   | 4.31              | 4.38   | 5.41   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.94   | 1.32              | 1.34   | 1.65   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.36  | 17.51             | 17.97  | 22.52  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.35   | 14.95             | 15.79  | 20.58  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.82   | 6.66              | 6.93   | 8.86   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 35.64  | 51.90             | 52.89  | 65.65  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.96   | 5.23              | 5.45   | 6.97   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 19.33  | 27.10             | 27.48  | 33.87  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.36              | 0.37   | 0.45   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.42  | 26.10             | 26.50  | 32.73  |



**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 23.84  | 34.12             | 34.69  | 42.92  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 31.99  | 46.85             | 47.77  | 59.36  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 1.85   | 3.19              | 3.31   | 4.22   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 3.98   | 6.37              | 6.56   | 8.28   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.21              | 0.22   | 0.27   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.35   | 5.04              | 5.16   | 6.44   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.40   | 0.59              | 0.61   | 0.76   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 56.17  | 80.61             | 81.98  | 101.49 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.09  | 14.79             | 15.08  | 18.74  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 42.83  | 65.55             | 67.21  | 84.15  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 16.39  | 22.93             | 23.24  | 28.63  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 38.06  | 54.69             | 55.63  | 68.89  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.98   | 2.74              | 2.77   | 3.41   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 3.20   | 4.55              | 4.62   | 5.71   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 42.34  | 58.72             | 59.45  | 73.12  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 75.32  | 107.24            | 108.95 | 134.68 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.66   | 5.25              | 5.34   | 6.61   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.25   | 2.71              | 2.88   | 3.78   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 133.89 | 188.78            | 191.55 | 236.34 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 133.84 | 188.70            | 191.47 | 236.24 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 33.18  | 48.86             | 49.86  | 62.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.01   | 6.10              | 6.24   | 7.81     |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.35   | 9.94              | 10.22  | 12.84    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 99.54  | 143.82            | 146.40 | 181.46   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 70.20  | 102.58            | 104.56 | 129.87   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.19   | 1.94              | 2.00   | 2.53     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.32   | 2.15              | 2.22   | 2.80     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.47   | 13.62             | 13.86  | 17.16    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 77.40  | 109.36            | 111.00 | 137.01   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 72.75  | 102.89            | 104.44 | 128.94   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 104.43 | 149.67            | 152.19 | 188.35   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 89.08  | 125.47            | 127.29 | 157.03   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.38              | 0.39   | 0.49     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.33              | 0.34   | 0.43     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.33              | 0.34   | 0.43     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 18.42  | 25.89             | 26.26  | 32.38    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.50   | 2.33              | 2.39   | 3.00     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 534.59 | 819.55            | 840.35 | 1,052.55 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 534.32 | 819.16            | 839.96 | 1,052.06 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.44   | 6.51              | 6.64   | 8.26     |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 20.88  | 33.02             | 33.98  | 42.78  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 35.73  | 54.98             | 56.41  | 70.69  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.19   | 4.66              | 4.75   | 5.90   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 16.26  | 22.64             | 22.94  | 28.23  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 19.84  | 27.64             | 28.00  | 34.46  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 19.84  | 27.64             | 28.00  | 34.46  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 19.74  | 27.50             | 27.86  | 34.29  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.71   | 6.51              | 6.78   | 8.67   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.20   | 10.02             | 10.15  | 12.50  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 201.19 | 284.64            | 288.94 | 356.73 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 154.79 | 218.63            | 221.89 | 273.87 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 37.85  | 53.56             | 54.38  | 67.13  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.61   | 0.84              | 0.85   | 1.04   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.42   | 14.21             | 14.54  | 18.16  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.67   | 6.89              | 7.03   | 8.75   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 15.78  | 22.78             | 23.18  | 28.73  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 15.37  | 21.58             | 21.89  | 26.98  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 15.37  | 21.58             | 21.89  | 26.98  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.82   | 7.31              | 7.48   | 9.36   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.25  | 17.52             | 17.81  | 22.03  |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.54   | 8.35              | 8.55   | 10.68  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.64              | 0.65   | 0.82   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.08   | 12.84             | 13.03  | 16.09  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.84   | 13.90             | 14.11  | 17.42  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.84   | 13.90             | 14.11  | 17.42  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.66   | 5.25              | 5.34   | 6.61   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.81   | 1.23              | 1.26   | 1.58   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.32  | 81.93             | 83.28  | 103.02 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 168.22 | 252.53            | 258.28 | 322.34 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 11.05  | 15.33             | 15.53  | 19.10  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 7.94   | 12.39             | 12.73  | 15.99  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.94   | 12.39             | 12.73  | 15.99  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.84   | 2.56              | 2.59   | 3.19   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.89   | 2.72              | 2.77   | 3.43   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.70   | 1.01              | 1.03   | 1.28   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.12   | 8.79              | 8.94   | 11.07  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.09   | 8.74              | 8.89   | 11.01  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.60   | 9.48              | 9.65   | 11.94  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 105.60 | 153.86            | 156.78 | 194.63 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.24  | 89.31             | 90.83  | 112.44 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 82.49  | 119.20            | 121.33 | 150.39 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 82.49  | 119.20            | 121.33 | 150.39 |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 18.12  | 26.02             | 26.47  | 32.77  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.80   | 8.33              | 8.47   | 10.48  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.50   | 0.71              | 0.73   | 0.90   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 21.03  | 29.30             | 29.68  | 36.53  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.84  | 50.57             | 52.06  | 65.59  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.92   | 4.07              | 4.12   | 5.07   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.72  | 32.94             | 34.11  | 43.32  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.31   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.33   | 1.89              | 1.92   | 2.37   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.72   | 1.01              | 1.02   | 1.26   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.94   | 2.68              | 2.71   | 3.33   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 40.34  | 56.22             | 56.95  | 70.11  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 40.34  | 56.22             | 56.95  | 70.11  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 40.34  | 56.22             | 56.95  | 70.11  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 40.34  | 56.22             | 56.95  | 70.11  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.25   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.42  | 26.10             | 26.50  | 32.73  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 53.03  | 76.31             | 77.64  | 96.16  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 122.44   | 170.95            | 173.23   | 213.34   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 123.80   | 172.85            | 175.16   | 215.71   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.82     | 3.94              | 3.99     | 4.92     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 8.26     | 17.84             | 18.93    | 24.83    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.81    | 18.92             | 19.32    | 24.04    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.14     | 1.66              | 1.69     | 2.10     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.72     | 1.05              | 1.07     | 1.33     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.72     | 1.05              | 1.07     | 1.33     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.99    | 25.37             | 26.12    | 32.90    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.47     | 0.68              | 0.70     | 0.87     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.58     | 10.90             | 11.09    | 13.74    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.77     | 10.11             | 10.33    | 12.88    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.38     | 4.77              | 4.84     | 5.98     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,163.76 | 1,619.21          | 1,640.08 | 2,018.39 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 81.43    | 121.31            | 123.96   | 154.49   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 81.43    | 121.31            | 123.96   | 154.49   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,164.77 | 1,620.61          | 1,641.50 | 2,020.14 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1,164.67 | 1,620.47          | 1,641.36 | 2,019.96 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,164.46 | 1,620.18          | 1,641.07 | 2,019.60 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,164.60 | 1,620.38          | 1,641.26 | 2,019.84 |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,163.76 | 1,619.21          | 1,640.08 | 2,018.39 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 102.57   | 146.73            | 149.17   | 184.55   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 99.25    | 142.19            | 144.58   | 178.92   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.58     | 12.37             | 12.58    | 15.59    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.61    | 44.90             | 45.98    | 57.48    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.00    | 31.21             | 31.88    | 39.72    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 21.00    | 31.21             | 31.88    | 39.72    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04     | 0.06              | 0.07     | 0.08     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.61     | 13.83             | 14.45    | 18.57    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.49     | 8.95              | 9.06     | 11.13    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.30     | 12.92             | 13.09    | 16.10    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 279.54   | 388.90            | 393.90   | 484.75   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.39    | 50.08             | 50.84    | 62.77    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.89     | 12.32             | 12.48    | 15.34    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.44     | 4.76              | 4.82     | 5.93     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.33     | 2.10              | 2.17     | 2.73     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 34.66    | 49.92             | 50.79    | 62.92    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.04     | 4.46              | 4.55     | 5.65     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 8.23     | 11.88             | 12.09    | 14.98    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 72.66  | 104.32            | 106.11 | 131.36 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 86.44  | 125.95            | 128.35 | 159.33 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 103.14 | 151.03            | 154.00 | 191.34 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.86   | 1.25              | 1.27   | 1.58   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.86   | 1.25              | 1.27   | 1.58   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.86   | 1.25              | 1.27   | 1.58   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 130.57 | 183.62            | 186.26 | 229.69 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 94.02  | 132.31            | 134.22 | 165.54 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 260.77 | 380.66            | 387.98 | 481.79 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.04   | 11.99             | 12.25  | 15.27  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.69   | 11.46             | 11.71  | 14.60  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 14.62  | 20.45             | 20.72  | 25.53  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.92   | 11.32             | 11.50  | 14.23  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.04   | 2.80              | 2.84   | 3.48   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.75              | 0.77   | 0.96   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.68   | 3.73              | 3.78   | 4.66   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.06   | 0.11              | 0.12   | 0.15   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.06   | 0.11              | 0.12   | 0.15   |



**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.16     | 4.38              | 4.44     | 5.46     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.10    | 22.58             | 23.08    | 28.79    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24     | 0.35              | 0.36     | 0.45     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.09     | 1.72              | 1.77     | 2.23     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.10     | 3.31              | 3.40     | 4.28     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 15.46    | 22.36             | 22.76    | 28.22    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.72     | 1.05              | 1.07     | 1.32     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.89     | 8.12              | 8.22     | 10.10    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 145.40   | 204.14            | 207.02   | 255.21   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.42     | 0.64              | 0.66     | 0.83     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.93    | 15.10             | 15.28    | 18.79    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.88    | 15.04             | 15.22    | 18.71    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.56     | 2.21              | 2.24     | 2.77     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 68.74    | 97.38             | 98.87    | 122.09   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61     | 1.04              | 1.08     | 1.37     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 44.78    | 63.54             | 64.53    | 79.71    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,254.58 | 1,770.54          | 1,796.74 | 2,217.23 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 698.19   | 985.77            | 1,000.42 | 1,234.65 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,257.49 | 1,773.15          | 1,799.19 | 2,219.90 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,254.04 | 1,768.24          | 1,794.20 | 2,213.73 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,254.58 | 1,770.54          | 1,796.74 | 2,217.23 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 4.21     | 5.83              | 5.90     | 7.25     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.79     | 5.41              | 5.50     | 6.79     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 134.68   | 195.27            | 198.85   | 246.63   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14     | 0.20              | 0.20     | 0.25     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.37     | 6.18              | 6.27     | 7.75     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.37     | 6.18              | 6.27     | 7.75     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.30     | 3.38              | 3.45     | 4.30     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.75     | 12.90             | 13.16    | 16.38    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.06    | 23.03             | 23.42    | 28.98    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.30     | 12.14             | 12.37    | 15.37    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03     | 0.07              | 0.07     | 0.10     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.06     | 4.22              | 4.27     | 5.25     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07     | 0.10              | 0.10     | 0.13     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.42     | 8.91              | 9.03     | 11.10    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.00     | 12.91             | 13.13    | 16.26    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 76.52    | 110.30            | 112.23   | 139.05   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 345.72   | 495.50            | 503.85   | 623.58   |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 345.72 | 495.50            | 503.85 | 623.58 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 550.83 | 783.03            | 795.38 | 982.87 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 514.98 | 732.78            | 744.42 | 920.07 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 267.11 | 371.37            | 376.12 | 462.81 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 280.69 | 390.50            | 395.53 | 486.75 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 280.48 | 390.21            | 395.24 | 486.39 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.90              | 0.95   | 1.23   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.35   | 7.71              | 7.85   | 9.72   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.49   | 3.60              | 3.67   | 4.55   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 34.13  | 49.56             | 50.47  | 62.62  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.05   | 2.94              | 2.99   | 3.70   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.80  | 21.09             | 21.43  | 26.50  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 159.59 | 229.15            | 233.06 | 288.54 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 159.59 | 229.15            | 233.06 | 288.54 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 142.49 | 202.64            | 205.85 | 254.39 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 142.49 | 202.64            | 205.85 | 254.39 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.68   | 3.97              | 4.05   | 5.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 90.65  | 127.21            | 128.99 | 159.01 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 58.21  | 82.57             | 83.85  | 103.57 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 77.62    | 109.97            | 111.66   | 137.89   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.03     | 11.86             | 12.11    | 15.07    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 77.83    | 111.82            | 113.73   | 140.82   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 5.44     | 7.57              | 7.67     | 9.44     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 30.47    | 42.41             | 42.95    | 52.86    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.65     | 2.35              | 2.39     | 2.96     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 110.33   | 157.01            | 159.51   | 197.15   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 183.06   | 257.95            | 261.71   | 322.86   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23     | 0.33              | 0.34     | 0.42     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 34.89    | 49.68             | 50.47    | 62.38    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 34.89    | 49.68             | 50.47    | 62.38    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 34.89    | 49.68             | 50.47    | 62.38    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 26.10    | 37.34             | 37.95    | 46.96    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 3.79     | 5.86              | 6.02     | 7.55     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 113.45   | 162.37            | 165.08   | 204.25   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 33.31    | 46.00             | 46.55    | 57.20    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 33.31    | 46.00             | 46.55    | 57.20    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 38.91    | 53.72             | 54.36    | 66.80    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1,158.97 | 1,612.61          | 1,633.40 | 2,010.18 |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 102.14 | 145.26            | 147.55 | 182.35 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.40  | 34.71             | 35.26  | 43.57  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.84   | 13.10             | 13.37  | 16.65  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.97   | 2.87              | 2.93   | 3.63   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.46   | 3.55              | 3.61   | 4.47   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 100.88 | 140.28            | 142.07 | 174.83 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 93.87  | 130.02            | 131.61 | 161.83 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 181.95 | 253.54            | 256.87 | 316.21 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 181.99 | 253.60            | 256.93 | 316.29 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 179.26 | 249.79            | 253.06 | 311.53 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.08  | 28.58             | 29.03  | 35.88  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.45  | 20.22             | 20.68  | 25.81  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 127.97 | 183.25            | 186.32 | 230.55 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 74.84  | 106.63            | 108.34 | 133.93 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 74.84  | 106.63            | 108.34 | 133.93 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 43.63  | 60.44             | 61.18  | 75.23  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 262.07 | 369.18            | 374.55 | 462.05 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 262.61 | 369.93            | 375.32 | 462.99 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 262.34 | 369.55            | 374.93 | 462.52 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 505.52 | 706.35            | 715.86 | 881.70 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 503.02 | 702.88            | 712.35 | 877.38 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 505.52 | 706.35            | 715.86 | 881.70 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 462.32 | 646.25            | 654.99 | 806.79 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 337.56 | 470.22            | 476.36 | 586.37 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 337.56 | 470.22            | 476.36 | 586.37 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 337.56 | 470.22            | 476.36 | 586.37 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 337.49 | 470.12            | 476.26 | 586.25 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 337.49 | 470.12            | 476.26 | 586.25 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.57              | 0.59   | 0.74   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.89              | 0.91   | 1.13   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.75   | 1.05              | 1.06   | 1.31   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.79   | 5.41              | 5.50   | 6.79   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 73.82  | 105.60            | 107.35 | 132.81 |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 19.79  | 27.78             | 28.17  | 34.73  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 223.43 | 321.03            | 326.54 | 404.32 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 35.93  | 51.64             | 52.53  | 65.05  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.91  | 16.16             | 16.50  | 20.54  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 10.91  | 16.16             | 16.50  | 20.54  |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 2.36   | 3.57              | 3.66   | 4.57   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.39   | 4.79              | 4.86   | 6.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.25   | 4.58              | 4.65   | 5.73   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.33   | 1.88              | 1.91   | 2.36   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 39.29  | 55.70             | 56.56  | 69.86  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.01   | 1.50              | 1.53   | 1.90   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 22.80  | 32.36             | 32.87  | 40.60  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 23.49  | 33.35             | 33.87  | 41.85  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 84.66  | 120.55            | 122.47 | 151.39 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 13.21  | 18.75             | 19.04  | 23.53  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.61   | 4.52              | 4.70   | 6.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 81.59  | 125.33            | 128.55 | 161.06 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 257.36 | 386.77            | 395.64 | 493.85 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 255.61 | 384.33            | 393.16 | 490.80 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 255.61 | 384.33            | 393.16 | 490.80 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 16.52  | 23.11             | 23.42  | 28.86  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 5.93   | 8.96              | 9.17   | 11.45  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 11.23  | 17.14             | 17.57  | 21.99  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.23  | 17.14             | 17.57  | 21.99  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 11.23  | 17.14             | 17.57  | 21.99  |

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 27.46  | 38.10             | 38.57  | 47.45  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.70   | 2.59              | 2.66   | 3.33   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 44.12  | 63.38             | 64.47  | 79.82  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.68   | 2.31              | 2.34   | 2.87   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.00  | 18.00             | 18.41  | 22.97  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.36   | 6.54              | 6.69   | 8.35   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.82   | 11.04             | 11.20  | 13.82  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.92   | 10.74             | 11.03  | 13.84  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 60.46  | 88.18             | 89.87  | 111.58 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.38   | 0.53              | 0.54   | 0.66   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.72   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.80   | 9.54              | 9.67   | 11.92  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.37              | 0.39   | 0.51   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 69.29  | 99.93             | 101.69 | 126.01 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.68   | 3.90              | 3.97   | 4.93   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.39   | 7.58              | 7.87   | 10.04  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 30.47  | 42.41             | 42.95  | 52.86  |



**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 21.34  | 30.27             | 30.74  | 37.97  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 66.29  | 100.29            | 102.67 | 128.30 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 55.68  | 77.09             | 78.03  | 95.94  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.37   | 3.46              | 3.53   | 4.38   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.00  | 18.00             | 18.41  | 22.97  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.37   | 0.56              | 0.57   | 0.72   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.54   | 6.54              | 6.65   | 8.24   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.45   | 0.74              | 0.76   | 0.96   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.48   | 2.17              | 2.21   | 2.75   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.80   | 2.61              | 2.66   | 3.30   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 50.61  | 70.66             | 71.61  | 88.18  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 375.58 | 526.15            | 533.41 | 657.32 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 374.87 | 525.15            | 532.40 | 656.07 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 369.10 | 517.10            | 524.25 | 646.03 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 25.87  | 37.00             | 37.61  | 46.54  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.25   | 12.16             | 12.42  | 15.45  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.56   | 13.62             | 14.03  | 17.68  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.11   | 10.34             | 10.53  | 13.07  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.21  | 29.90             | 30.53  | 38.01  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.21  | 29.90             | 30.53  | 38.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-15. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 28.78  | 40.48             | 41.06  | 50.63  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 18.30  | 25.95             | 26.35  | 32.54  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.52   | 5.18              | 5.29   | 6.58   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 9.75   | 14.35             | 14.64  | 18.20  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 40.30  | 58.95             | 60.09  | 74.65  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 31.68  | 46.78             | 47.74  | 59.41  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 71.91  | 101.37            | 102.86 | 126.91 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 14.57  | 20.30             | 20.57  | 25.32  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 13.43  | 19.44             | 19.80  | 24.55  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 39.84  | 59.35             | 59.54  | 73.26  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 186.57 | 273.95            | 274.73 | 337.18 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 147.56 | 208.66            | 209.00 | 254.74 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 73.65  | 105.36            | 105.57 | 128.95 |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.35  | 35.55             | 35.59  | 43.32  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.38  | 14.71             | 14.73  | 17.96  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.71   | 1.03              | 1.03   | 1.27   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.84   | 6.88              | 6.89   | 8.40   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 63.49  | 89.21             | 89.33  | 108.75 |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 78.46  | 109.76            | 109.89 | 133.67 |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 78.46  | 109.76            | 109.89 | 133.67 |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 15.09  | 21.10             | 21.13  | 25.70  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 14.36  | 19.73             | 19.74  | 23.93  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 14.39  | 22.59             | 22.70  | 28.18  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.85   | 1.35              | 1.36   | 1.69   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.46   | 12.63             | 12.67  | 15.60  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.47  | 44.04             | 44.14  | 54.02  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 356.90 | 519.29            | 520.62 | 637.91 |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.12              | 1.12     | 1.37     |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 25.55  | 38.10             | 38.23    | 47.05    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.82   | 13.62             | 13.68    | 16.94    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 69.45  | 97.18             | 97.30    | 118.36   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 69.19  | 95.66             | 95.74    | 116.19   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.71   | 3.83              | 3.83     | 4.67     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.40              | 0.40     | 0.48     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.89   | 2.60              | 2.60     | 3.15     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 779.37 | 1,101.86          | 1,103.61 | 1,345.10 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 704.47 | 990.49            | 991.88   | 1,207.68 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 780.02 | 1,102.81          | 1,104.56 | 1,346.27 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.94   | 8.20              | 8.21     | 9.96     |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 58.23  | 82.20             | 82.33    | 100.31   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.49   | 2.13              | 2.14     | 2.61     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 336.65 | 467.95            | 468.42   | 569.09   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 331.79 | 461.17            | 461.63   | 560.84   |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 336.65 | 467.95            | 468.42 | 569.09   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 131.21 | 206.75            | 207.81 | 258.14   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 131.21 | 206.75            | 207.81 | 258.14   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 92.70  | 150.41            | 151.32 | 188.86   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.81   | 2.53              | 2.53   | 3.07     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.75   | 8.48              | 8.50   | 10.44    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.86  | 51.37             | 51.47  | 62.89    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.04   | 4.34              | 4.35   | 5.31     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.14  | 44.08             | 44.54  | 56.88    |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.04  | 24.72             | 25.08  | 32.65    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 151.30 | 217.79            | 218.27 | 266.92   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 151.38 | 217.90            | 218.38 | 267.05   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 151.38 | 217.90            | 218.38 | 267.05   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 39.84  | 59.35             | 59.54  | 73.26    |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.59   | 2.38              | 2.39   | 2.94     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 89.73  | 129.34            | 129.64 | 158.57   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 633.21 | 896.51            | 897.98 | 1,094.77 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 85.13  | 116.91            | 116.98 | 141.79   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.66   | 5.81              | 5.89   | 7.64     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.09     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 118.30 | 167.53            | 167.81 | 204.59   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.63   | 0.87              | 0.87   | 1.06     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.72   | 9.25              | 9.26     | 11.23    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.27   | 6.02              | 6.03     | 7.34     |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 44.33  | 62.65             | 62.75    | 76.48    |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 44.33  | 62.65             | 62.75    | 76.48    |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 44.33  | 62.65             | 62.75    | 76.48    |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.59   | 9.34              | 9.35     | 11.40    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 23.71  | 32.39             | 32.40    | 39.23    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.44              | 0.45     | 0.54     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 41.72  | 58.53             | 58.60    | 71.32    |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 41.72  | 58.53             | 58.60    | 71.32    |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 41.72  | 58.53             | 58.60    | 71.32    |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 140.94 | 194.97            | 195.13   | 236.85   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 300.22 | 421.87            | 422.45   | 514.30   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 291.40 | 409.39            | 409.95   | 499.07   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 69.91  | 99.37             | 99.55    | 121.46   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 753.74 | 1,056.88          | 1,058.26 | 1,287.83 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 753.74 | 1,056.88          | 1,058.26 | 1,287.83 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 768.00 | 1,076.59          | 1,077.98 | 1,311.77 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.89  | 30.31             | 30.33    | 36.83    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.03  | 15.27             | 15.28    | 18.56    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.89  | 30.31             | 30.33    | 36.83    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.79  | 30.17             | 30.20    | 36.66    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 268.67 | 377.95            | 378.48   | 460.87   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 271.53 | 382.03            | 382.58   | 465.87   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 259.38 | 364.72            | 365.23   | 444.70   |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 176.35 | 244.26            | 244.48   | 296.82   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 43.19  | 67.53             | 67.86    | 84.20    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 30.89  | 44.20             | 44.29    | 54.10    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 109.32 | 154.61            | 154.85   | 188.75   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 335.37 | 468.46            | 469.00   | 570.33   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 335.04 | 468.00            | 468.55   | 569.78   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 308.14 | 430.44            | 430.94   | 524.06   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 305.54 | 426.85            | 427.35   | 519.69   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.67   | 6.64              | 6.65     | 8.11     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 67.29  | 99.19             | 99.49    | 122.18   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 243.06 | 344.31            | 344.88   | 420.50   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 243.06 | 344.31            | 344.88   | 420.50   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 218.76 | 309.41            | 309.91   | 377.75   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.03   | 11.18             | 11.19    | 13.60    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.92   | 11.03             | 11.04    | 13.42    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 79.47  | 112.39            | 112.57   | 137.21   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 108.76 | 153.81            | 154.06   | 187.78   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 847.11 | 1,182.92          | 1,184.29 | 1,440.07 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 865.43 | 1,209.29          | 1,210.72 | 1,472.40 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 141.62 | 196.64            | 196.83   | 239.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 122.96 | 170.97            | 171.14 | 207.93 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 320.31 | 476.19            | 477.75 | 587.63 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 416.16 | 616.70            | 618.66 | 760.51 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 416.16 | 616.70            | 618.66 | 760.51 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 150.55 | 213.17            | 213.52 | 260.31 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 48.72  | 70.76             | 70.93  | 86.88  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 582.07 | 819.57            | 820.76 | 999.60 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 569.87 | 802.25            | 803.41 | 978.42 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 569.87 | 802.25            | 803.41 | 978.42 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.41   | 2.11              | 2.12   | 2.61   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.06   | 5.60              | 5.60   | 6.79   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.76   | 6.76              | 6.77   | 8.26   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.37   | 1.90              | 1.90   | 2.31   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.88  | 27.51             | 27.63  | 34.19  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.22  | 21.22             | 21.48  | 27.73  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.78   | 8.62              | 8.70   | 11.03  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 49.51  | 71.76             | 71.93  | 88.08  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.84   | 6.95              | 7.01   | 8.90   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 27.69  | 38.53             | 38.57  | 46.87  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.62              | 0.62   | 0.76   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 27.21  | 38.27             | 38.33  | 46.67  |



**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 34.08  | 48.46             | 48.55  | 59.24  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 46.50  | 67.76             | 67.94  | 83.27  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 2.35   | 4.13              | 4.16   | 5.26   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 5.51   | 8.84              | 8.89   | 11.07  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.33   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 4.84   | 7.25              | 7.27   | 8.96   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.79              | 0.79   | 0.98   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 80.28  | 114.49            | 114.71 | 140.03 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 14.24  | 20.76             | 20.81  | 25.51  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 60.81  | 92.87             | 93.25  | 115.24 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 23.48  | 32.60             | 32.63  | 39.63  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 54.40  | 77.68             | 77.83  | 95.04  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.18   | 4.37              | 4.38   | 5.31   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 4.57   | 6.46              | 6.47   | 7.89   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 60.02  | 82.56             | 82.61  | 100.16 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 107.82 | 152.47            | 152.71 | 186.14 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 5.58   | 7.94              | 7.96   | 9.71   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.70   | 3.80              | 3.85   | 5.02   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 191.31 | 267.74            | 268.07 | 326.11 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 191.35 | 267.79            | 268.13 | 326.17 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 47.31  | 69.33             | 69.52  | 85.30  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.70   | 8.64              | 8.67     | 10.70    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.00   | 14.07             | 14.14    | 17.54    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 142.20 | 204.24            | 204.67   | 250.19   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 100.17 | 145.59            | 145.96   | 178.80   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.53   | 2.51              | 2.53     | 3.16     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.87   | 3.06              | 3.08     | 3.85     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 13.56  | 19.38             | 19.42    | 23.72    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 110.81 | 155.43            | 155.64   | 189.42   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 104.14 | 146.23            | 146.43   | 178.24   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 149.29 | 212.59            | 212.98   | 259.93   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 127.82 | 178.70            | 178.92   | 217.61   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.49              | 0.49     | 0.60     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.30   | 0.47              | 0.47     | 0.58     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.47              | 0.47     | 0.58     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 26.38  | 36.80             | 36.84    | 44.79    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.21   | 3.43              | 3.45     | 4.27     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 758.86 | 1,160.94          | 1,165.82 | 1,441.06 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 758.55 | 1,160.49          | 1,165.37 | 1,440.51 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.34   | 9.24              | 9.27     | 11.36    |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 29.54  | 46.72             | 46.96  | 58.37  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 50.59  | 77.71             | 78.05  | 96.54  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 23.50  | 32.46             | 32.49  | 39.43  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 28.45  | 39.30             | 39.33  | 47.73  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 28.45  | 39.30             | 39.33  | 47.73  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 28.41  | 39.25             | 39.28  | 47.67  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 4.55   | 8.31              | 8.39   | 10.65  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.34  | 14.28             | 14.29  | 17.34  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.23   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 288.00 | 404.52            | 405.07 | 493.10 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 221.61 | 310.73            | 311.14 | 378.64 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 52.52  | 73.79             | 73.89  | 89.95  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.08   | 1.48              | 1.48   | 1.79   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 13.40  | 20.14             | 20.21  | 24.90  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.74   | 9.90              | 9.93   | 12.18  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 23.21  | 33.31             | 33.38  | 40.80  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 21.95  | 30.59             | 30.62  | 37.22  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 21.95  | 30.59             | 30.62  | 37.22  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.88   | 10.41             | 10.45  | 12.89  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 17.51  | 24.89             | 24.93  | 30.41  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.34   | 12.54             | 12.58  | 15.51  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.54   | 0.81              | 0.81   | 1.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 13.00  | 18.25             | 18.27  | 22.24  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.97  | 19.58             | 19.61  | 23.86  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.97  | 19.58             | 19.61  | 23.86  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.58   | 7.94              | 7.96   | 9.71   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.16   | 1.77              | 1.77   | 2.19   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 81.97  | 116.39            | 116.59 | 142.22 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 239.33 | 358.01            | 359.26 | 442.36 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 15.85  | 21.81             | 21.83  | 26.46  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.88   | 15.65             | 15.73  | 19.55  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.88   | 15.65             | 15.73  | 19.55  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.63   | 3.64              | 3.64   | 4.42   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.94   | 4.21              | 4.22   | 5.16   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.93   | 1.33              | 1.33   | 1.63   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.64  | 15.19             | 15.22  | 18.58  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.64  | 15.19             | 15.22  | 18.58  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.23  | 16.03             | 16.06  | 19.60  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 150.72 | 218.40            | 218.93 | 268.05 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 89.03  | 126.96            | 127.20 | 155.28 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 117.80 | 169.19            | 169.55 | 207.26 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 117.80 | 169.19            | 169.55 | 207.26 |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 25.91  | 36.97             | 37.05  | 45.23  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.04   | 11.47             | 11.49  | 14.03  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.20   | 3.10              | 3.10   | 3.78   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.16  | 41.66             | 41.69  | 50.60  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 43.18  | 68.88             | 69.26  | 86.21  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.97   | 5.48              | 5.48   | 6.66   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 25.39  | 43.15             | 43.47  | 54.64  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.39   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.59   | 2.25              | 2.26   | 2.75   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.86   | 1.20              | 1.20   | 1.45   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.99   | 2.73              | 2.73   | 3.31   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 57.84  | 79.94             | 80.01  | 97.10  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 57.84  | 79.94             | 80.01  | 97.10  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.84  | 79.94             | 80.01  | 97.10  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.84  | 79.94             | 80.01  | 97.10  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 27.21  | 38.27             | 38.33  | 46.67  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 75.78  | 108.37            | 108.59 | 132.63 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 175.85   | 243.57            | 243.78   | 295.98   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 177.61   | 246.00            | 246.21   | 298.93   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.13     | 5.73              | 5.74     | 6.97     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 11.22    | 25.00             | 25.36    | 33.00    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 18.64    | 27.39             | 27.46    | 33.71    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.83     | 2.67              | 2.68     | 3.28     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.71     | 1.03              | 1.03     | 1.27     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.71     | 1.03              | 1.03     | 1.27     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.61    | 35.89             | 36.08    | 44.88    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.54     | 0.79              | 0.79     | 0.97     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.87    | 15.54             | 15.57    | 19.02    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 9.88     | 14.69             | 14.74    | 18.13    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.41     | 6.18              | 6.19     | 7.53     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,672.89 | 2,308.62          | 2,310.35 | 2,802.99 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 113.58   | 168.80            | 169.35   | 208.29   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 113.58   | 168.80            | 169.35   | 208.29   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,674.50 | 2,310.82          | 2,312.55 | 2,805.66 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1,674.38 | 2,310.65          | 2,312.38 | 2,805.45 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,674.01 | 2,310.15          | 2,311.88 | 2,804.84 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,674.25 | 2,310.48          | 2,312.21 | 2,805.24 |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,672.89 | 2,308.62          | 2,310.35 | 2,802.99 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 146.67   | 208.43            | 208.80   | 254.74   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 141.97   | 202.09            | 202.46   | 247.07   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.59    | 18.03             | 18.06    | 22.07    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 40.75    | 61.75             | 62.00    | 76.51    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.91    | 44.27             | 44.41    | 54.58    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 29.91    | 44.27             | 44.41    | 54.58    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.27    | 19.05             | 19.23    | 24.47    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.94     | 12.22             | 12.23    | 14.81    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.36    | 18.42             | 18.43    | 22.36    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 400.60   | 552.77            | 553.18   | 671.12   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 49.94    | 70.15             | 70.25    | 85.52    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 12.75    | 17.53             | 17.54    | 21.26    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.94     | 6.78              | 6.78     | 8.22     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.99     | 3.14              | 3.16     | 3.92     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 49.53    | 70.89             | 71.03    | 86.77    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.34     | 6.33              | 6.34     | 7.78     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.33    | 17.70             | 17.74    | 21.68    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 103.85 | 148.17            | 148.45 | 181.25 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 123.37 | 178.78            | 179.22 | 219.43 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 147.30 | 214.61            | 215.17 | 263.70 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.20   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 187.09 | 261.12            | 261.42 | 317.86 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 134.72 | 188.17            | 188.39 | 229.08 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 372.47 | 540.82            | 542.17 | 664.06 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.48  | 17.05             | 17.11  | 21.04  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.94  | 16.25             | 16.31  | 20.05  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.54  | 27.12             | 27.14  | 32.96  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.91  | 16.90             | 16.93  | 20.64  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.00   | 4.10              | 4.10   | 4.96   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.77   | 1.18              | 1.19   | 1.47   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.60   | 4.98              | 4.98   | 6.05   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.08   | 0.14              | 0.14   | 0.18   |



**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.78     | 6.59              | 6.59     | 8.00     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.49    | 32.02             | 32.12    | 39.53    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20     | 0.30              | 0.30     | 0.36     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.57     | 2.48              | 2.49     | 3.09     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.07     | 4.85              | 4.87     | 6.05     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 22.03    | 31.67             | 31.74    | 38.80    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.17     | 1.70              | 1.70     | 2.08     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.69     | 11.88             | 11.88    | 14.39    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 208.31   | 290.23            | 290.54   | 353.14   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.46     | 0.70              | 0.70     | 0.86     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 14.87    | 20.38             | 20.39    | 24.71    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.85    | 20.35             | 20.36    | 24.66    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.07     | 2.91              | 2.92     | 3.55     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 98.34    | 138.32            | 138.51   | 168.66   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.84     | 1.44              | 1.45     | 1.83     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 64.08    | 90.29             | 90.42    | 110.13   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,797.03 | 2,517.47          | 2,520.68 | 3,066.97 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,001.32 | 1,403.40          | 1,405.21 | 1,709.90 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,801.45 | 2,521.40          | 2,524.54 | 3,071.14 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,797.45 | 2,515.74          | 2,518.87 | 3,064.23 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,797.03 | 2,517.47          | 2,520.68 | 3,066.97 |
| NJ portion of the Northeast<br>Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 6.20     | 8.51              | 8.51     | 10.32    |
| Nogales, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.61     | 7.94              | 7.96     | 9.70     |
| Norfolk-Virginia Beach-Newport News (Hampton)   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 192.67   | 277.74            | 278.36   | 340.50   |
| Oakridge, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12     | 0.17              | 0.17     | 0.21     |
| Ogden Area, UT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.16     | 8.66              | 8.67     | 10.56    |
| Ogden Area, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.16     | 8.66              | 8.67     | 10.56    |
| Olmsted County; (part), MN  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.04     | 4.46              | 4.47     | 5.49     |
| Olmsted; City of Rochester, MN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.39    | 18.18             | 18.24    | 22.38    |
| Parkersburg-Marietta, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.96    | 32.71             | 32.77    | 40.00    |
| Parkersburg-Marietta, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.84    | 17.23             | 17.27    | 21.16    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                          | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04     | 0.10              | 0.10     | 0.13     |
| Pekin, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.47     | 6.11              | 6.11     | 7.40     |
| Penns Grove Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09     | 0.12              | 0.12     | 0.15     |
| Peoria County: Peoria, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.93     | 12.29             | 12.30    | 14.92    |
| Perth Amboy Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.43    | 20.57             | 20.60    | 25.15    |
| Philadelphia-Camden County Area, PA-NJ  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 109.34   | 156.63            | 156.95   | 191.76   |
| Philadelphia-Wilmington, PA-NJ-DE   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 494.24   | 703.81            | 705.11   | 860.56   |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 494.24 | 703.81            | 705.11   | 860.56   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 788.56 | 1,113.21          | 1,114.93 | 1,358.52 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 737.74 | 1,042.49          | 1,044.14 | 1,272.50 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 382.33 | 527.23            | 527.61   | 640.02   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 402.19 | 554.95            | 555.36   | 673.77   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 401.89 | 554.54            | 554.96   | 673.27   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.60   | 1.20              | 1.22     | 1.57     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.10   | 11.61             | 11.63    | 14.22    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.15   | 5.97              | 5.98     | 7.31     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 49.71  | 71.75             | 71.92    | 87.99    |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.93   | 4.18              | 4.19     | 5.11     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 19.13  | 27.07             | 27.12    | 33.06    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 228.11 | 325.46            | 326.08   | 398.10   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 228.11 | 325.46            | 326.08   | 398.10   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 204.01 | 288.12            | 288.57   | 351.64   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 204.01 | 288.12            | 288.57   | 351.64   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.82   | 5.63              | 5.64     | 6.93     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 130.40 | 181.59            | 181.78   | 220.93   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 83.21  | 117.21            | 117.38   | 142.96   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 111.09   | 156.28            | 156.50   | 190.57   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 11.82    | 17.37             | 17.42    | 21.38    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 111.33   | 158.93            | 159.24   | 194.43   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7.58     | 10.46             | 10.47    | 12.70    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 43.68    | 60.31             | 60.35    | 73.23    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 157.84   | 223.09            | 223.44   | 272.32   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 262.38   | 366.96            | 367.40   | 446.89   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.32     | 0.46              | 0.46     | 0.56     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 49.91    | 70.58             | 70.69    | 86.16    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 49.91    | 70.58             | 70.69    | 86.16    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 49.91    | 70.58             | 70.69    | 86.16    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 36.55    | 51.93             | 52.02    | 63.46    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.67     | 10.30             | 10.35    | 12.81    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 162.21   | 230.65            | 231.06   | 281.92   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 46.42    | 63.56             | 63.59    | 77.03    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 46.42    | 63.56             | 63.59    | 77.03    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 54.22    | 74.23             | 74.26    | 89.96    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1,666.32 | 2,299.63          | 2,301.35 | 2,792.09 |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 146.16 | 206.43            | 206.75 | 251.94 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.91  | 49.31             | 49.39  | 60.19  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.59  | 18.58             | 18.63  | 22.89  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.84   | 5.58              | 5.60   | 6.85   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.52   | 5.04              | 5.05   | 6.17   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 140.37 | 193.63            | 193.78 | 235.08 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 134.65 | 184.94            | 185.05 | 224.30 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 261.43 | 361.38            | 361.67 | 438.92 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 261.46 | 361.41            | 361.70 | 438.97 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 258.24 | 356.95            | 357.24 | 433.55 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.36  | 41.48             | 41.55  | 50.63  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.17  | 27.31             | 27.41  | 33.78  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 183.28 | 260.74            | 261.21 | 318.74 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 107.05 | 151.49            | 151.74 | 184.97 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 107.05 | 151.49            | 151.74 | 184.97 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 57.73  | 79.32             | 79.37  | 96.22  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 375.51 | 525.04            | 525.67 | 639.36 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 376.05 | 525.79            | 526.43 | 640.28 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 375.91 | 525.60            | 526.24   | 640.05   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 725.58 | 1,005.82          | 1,006.73 | 1,222.45 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 721.82 | 1,000.63          | 1,001.54 | 1,216.15 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 725.58 | 1,005.82          | 1,006.73 | 1,222.45 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 663.16 | 919.64            | 920.48   | 1,117.80 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 485.95 | 671.46            | 671.99   | 815.48   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 485.95 | 671.46            | 671.99   | 815.48   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 485.95 | 671.46            | 671.99   | 815.48   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 485.88 | 671.36            | 671.89   | 815.36   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 485.88 | 671.36            | 671.89   | 815.36   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.40   | 0.65              | 0.66     | 0.82     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.74   | 1.10              | 1.10     | 1.35     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.08   | 1.49              | 1.50     | 1.82     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.61   | 7.94              | 7.96     | 9.70     |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 105.56 | 150.00            | 150.27   | 183.32   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 28.41  | 39.59             | 39.63    | 48.17    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 319.01 | 455.46            | 456.34   | 557.22   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 50.71  | 72.44             | 72.58    | 88.63    |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.54  | 22.92             | 22.99    | 28.23    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 15.54  | 22.92             | 22.99    | 28.23    |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.42   | 5.16              | 5.18   | 6.39   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.85   | 6.80              | 6.81   | 8.29   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.76   | 6.66              | 6.66   | 8.10   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.77   | 2.49              | 2.49   | 3.03   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 56.23  | 79.15             | 79.27  | 96.53  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.53   | 2.26              | 2.26   | 2.78   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 32.11  | 45.27             | 45.34  | 55.23  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 33.13  | 46.70             | 46.77  | 56.97  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 121.11 | 171.27            | 171.54 | 209.09 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 19.64  | 27.68             | 27.72  | 33.77  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 3.65   | 6.38              | 6.43   | 8.11   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 113.41 | 173.90            | 174.65 | 215.97 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 366.11 | 548.32            | 550.25 | 677.67 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 363.61 | 544.84            | 546.77 | 673.45 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 363.61 | 544.84            | 546.77 | 673.45 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 23.67  | 32.86             | 32.89  | 39.94  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.88   | 13.37             | 13.42  | 16.54  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 15.95  | 24.29             | 24.39  | 30.12  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 15.95  | 24.29             | 24.39  | 30.12  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 15.95  | 24.29             | 24.39  | 30.12  |

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 38.27  | 52.66             | 52.69  | 63.89  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.02   | 3.07              | 3.08   | 3.80   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 63.05  | 90.01             | 90.19  | 110.12 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.39   | 3.26              | 3.26   | 3.95   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.07  | 25.52             | 25.61  | 31.53  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.23   | 6.33              | 6.35   | 7.82   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.96  | 15.35             | 15.37  | 18.70  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.81   | 15.20             | 15.27  | 18.92  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 86.34  | 125.26            | 125.57 | 153.77 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.56   | 0.77              | 0.77   | 0.93   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.59   | 0.82              | 0.82   | 0.99   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.97   | 13.89             | 13.90  | 16.89  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.51              | 0.52   | 0.68   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 99.15  | 142.13            | 142.43 | 174.04 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.84   | 7.00              | 7.01   | 8.59   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.15   | 10.69             | 10.77  | 13.58  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 43.68  | 60.31             | 60.35  | 73.23  |



**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 30.50  | 42.96             | 43.02  | 52.40  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 94.17  | 142.04            | 142.57 | 175.80 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 79.88  | 109.66            | 109.72 | 132.98 |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.07  | 25.52             | 25.61  | 31.53  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.50   | 0.76              | 0.76   | 0.94   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.42   | 9.19              | 9.21   | 11.25  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.56   | 0.93              | 0.94   | 1.18   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.04   | 2.97              | 2.98   | 3.66   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.41   | 3.50              | 3.51   | 4.29   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 72.54  | 100.48            | 100.57 | 122.10 |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 538.21 | 748.12            | 748.87 | 909.82 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 537.21 | 746.74            | 747.49 | 908.14 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 528.93 | 735.27            | 736.01 | 894.20 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 36.16  | 51.38             | 51.47  | 62.79  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.22  | 17.95             | 18.00  | 22.09  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.01  | 23.36             | 23.47  | 29.09  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.49  | 15.17             | 15.20  | 18.60  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 28.80  | 42.42             | 42.55  | 52.25  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 28.80  | 42.42             | 42.55  | 52.25  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-16. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 41.16  | 57.46             | 57.52  | 69.94  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 27.41  | 38.58             | 38.64  | 47.06  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.35   | 7.83              | 7.85   | 9.63   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 13.97  | 20.46             | 20.51  | 25.16  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 57.50  | 83.66             | 83.87  | 102.77 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 45.15  | 66.36             | 66.55  | 81.69  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 102.97 | 144.09            | 144.27 | 175.50 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 20.97  | 28.98             | 29.00  | 35.19  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 19.04  | 27.40             | 27.47  | 33.59  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.01   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.11  | -0.15  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.09  | -0.13  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.16              | 0.13   | 0.15   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | -0.01  | -0.02  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | -0.02  | -0.03  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | -0.02  | -0.03  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | -0.01  | -0.01  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.45   | 0.60              | 0.44   | 0.48   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.34              | 0.36   | 0.43   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.06  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.06  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | -0.37  | -0.55  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.06              | -0.33  | -0.49  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | -0.37  | -0.55  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.43   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.06              | -0.13  | -0.20  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | -0.12  | -0.20  |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | -0.13  | -0.20  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.24   | 6.81              | 7.16   | 8.49   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.24   | 6.81              | 7.16   | 8.49   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.68   | 2.19              | 2.28   | 2.70   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.51   | 0.66              | 0.70   | 0.83   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.51   | 0.66              | 0.71   | 0.84   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | -0.07  | -0.11  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | -0.07  | -0.11  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | -0.07  | -0.11  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.01   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.03   | 0.05              | 0.00   | -0.01  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.01              | -0.33  | -0.49  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -0.01  | -0.01             | -0.05  | -0.08  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | 0.00              | -0.07  | -0.10  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.31   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.31   | 0.41              | 0.41   | 0.48   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.13  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.19  | -0.26  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.18  | -0.25  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | -0.02  | -0.04  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.15   | 5.41              | 5.32   | 6.21   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.15   | 5.41              | 5.32   | 6.21   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.15   | 5.41              | 5.31   | 6.19   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | -0.10  | -0.16  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | -0.10  | -0.16  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | -0.09  | -0.15  |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.11  | -0.16  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.21  | -0.30  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.21  | -0.30  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.19  | -0.27  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.19  | -0.27  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.02   | 0.01   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.01             | -0.15  | -0.21  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.01             | -0.15  | -0.21  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.13  | -0.19  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.07  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.30   | 0.41              | -0.04  | -0.17  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.41              | -0.05  | -0.19  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | -0.06  | -0.09  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | -0.04  | -0.07  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.51   | 0.67              | 0.55   | 0.62   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.54   | 0.72              | 0.55   | 0.60   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.54   | 0.72              | 0.55   | 0.60   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.08   | 0.07   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.16              | -0.15  | -0.26  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | -0.15  | -0.25  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | -0.15  | -0.25  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.36   | 1.76              | 1.87   | 2.22   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.29   | 0.38              | 0.40   | 0.47   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.18   | 0.20   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |



**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.01  | 0.00              | -0.05  | -0.07  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | -0.01  | -0.02  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.12  | -0.17  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.12  | -0.17  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.06  | -0.08  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | -0.04  | -0.07  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | -0.04  | -0.06  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | -0.06  | -0.10  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.01             | -0.08  | -0.11  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 8.25   | 10.73             | 11.03  | 13.00  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.25   | 10.73             | 11.03  | 13.00  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | -0.01  | -0.02  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.38              | 0.40   | 0.47   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.18  | -0.25  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.14  | -0.20  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.06  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | -0.04  | -0.08  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.38              | 0.39   | 0.47   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.38              | 0.39   | 0.47   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.13  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.08  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.10  |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.36   | 1.77              | 1.86   | 2.20   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.36   | 1.77              | 1.86   | 2.21   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.05  | -0.06  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.11  | -0.16  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.01  | -0.01             | -0.11  | -0.16  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.51   | 0.66              | 0.71   | 0.84   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.83   | 3.68              | 3.89   | 4.62   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.66   | 2.15              | 2.27   | 2.69   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.46   | 5.83              | 5.23   | 5.97   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.53   | 5.89              | 6.19   | 7.33   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.53   | 5.89              | 6.19   | 7.33   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.46   | 5.83              | 5.23   | 5.97   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 4.46   | 5.83              | 5.23   | 5.97   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.46   | 5.83              | 5.23   | 5.97   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.46   | 5.83              | 5.23   | 5.97   |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.46   | 5.83              | 5.23   | 5.97   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.08  | -0.12  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.64   | 4.73              | 4.99   | 5.93   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.84   | 1.09              | 1.15   | 1.37   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.03  | -0.03             | -0.26  | -0.36  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.09   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.38              | 0.35   | 0.40   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.38              | 0.34   | 0.39   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.38              | 0.33   | 0.37   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.12  | -0.17  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.08  | -0.12  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.45   | 0.59              | 0.44   | 0.47   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | -0.08  | -0.12  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | -0.03  | -0.05  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.06  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.77              | -0.19  | -0.48  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.18   | 0.25              | -0.29  | -0.49  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.56   | 0.77              | -0.19  | -0.49  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.56   | 0.77              | -0.19  | -0.48  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.56   | 0.77              | -0.19  | -0.48  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | -0.08  | -0.13  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.52              | 0.55   | 0.65   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.26   | 0.34              | 0.30   | 0.34   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.76   | 2.29              | 2.17   | 2.50   |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.76   | 2.29              | 2.17   | 2.50   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.74   | 2.28              | 1.98   | 2.24   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.74   | 2.28              | 2.01   | 2.29   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.03  | -0.02             | -0.25  | -0.35  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.03             | -0.26  | -0.37  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.03             | -0.26  | -0.37  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.00   | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.03              | -0.09  | -0.14  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | -0.09  | -0.14  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | -0.08  | -0.12  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | -0.08  | -0.12  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | -0.06  | -0.09  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.04   | 0.06              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.01   | -0.01  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.01  | -0.01             | -0.10  | -0.14  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.16  | -0.23  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -0.01  | -0.01             | -0.10  | -0.14  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 4.46   | 5.83              | 5.24   | 5.98   |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.08  | -0.11  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | -0.07  | -0.10  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.08  | -0.11  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.19   | 0.25              | 0.12   | 0.10   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.19   | 0.25              | 0.12   | 0.10   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.19   | 0.25              | 0.12   | 0.10   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.71   | 0.92              | 0.96   | 1.14   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.48   | 1.92              | 1.94   | 2.28   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.70   | 0.91              | 0.91   | 1.06   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.70   | 0.91              | 0.91   | 1.06   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.06  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.02  | -0.02             | -0.23  | -0.32  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.23  | -0.32  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.23  | -0.32  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.49              | 0.10   | 0.02   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.49              | 0.11   | 0.02   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.36   | 0.49              | 0.10   | 0.02   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.37   | 0.49              | 0.14   | 0.07   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.29   | 0.39              | 0.14   | 0.09   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.29   | 0.39              | 0.14   | 0.09   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.29   | 0.39              | 0.14   | 0.09   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.39              | 0.14   | 0.09   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.39              | 0.14   | 0.09   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.05  | -0.08  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -0.02  | -0.02             | -0.19  | -0.27  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.07  | -0.11  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.30   | 0.39              | 0.41   | 0.48   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.06  | -0.09  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.97   | 1.27              | 1.17   | 1.34   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.97   | 1.27              | 1.17   | 1.34   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.97   | 1.27              | 1.17   | 1.34   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.80   | 1.04              | 1.10   | 1.30   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.04  | -0.05  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.64   | 4.73              | 4.97   | 5.89   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.06  | -0.08  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |



**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.55   | 5.91              | 6.23   | 7.38   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.02              | -0.02  | -0.04  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.16   | 0.19   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.20   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.17   | 0.21   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.05  | -0.07  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.04  | -0.03             | -0.34  | -0.48  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.04  | -0.03             | -0.34  | -0.48  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.33  | -0.47  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.06   | 0.07   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.06   | 0.07   |

**Table A-17. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.03  | -0.05  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.01  | -0.01             | -0.06  | -0.09  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.56  | 22.62             | 22.63  | 29.79  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 73.11  | 105.92            | 105.09 | 138.10 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 61.91  | 89.69             | 88.98  | 116.94 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 33.11  | 48.41             | 49.13  | 64.90  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.79  | 15.63             | 15.51  | 20.38  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.72   | 5.39              | 5.38   | 7.08   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.54   | 0.78              | 0.79   | 1.04   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.50   | 5.08              | 5.07   | 6.67   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.40  | 39.77             | 39.64  | 52.14  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 33.99  | 49.32             | 49.11  | 64.59  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.99  | 49.32             | 49.11  | 64.59  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.52   | 9.45              | 9.40   | 12.37  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.32   | 9.16              | 9.08   | 11.94  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 5.26   | 7.64              | 7.63   | 10.05  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.48              | 0.48   | 0.64   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.21   | 4.66              | 4.62   | 6.07   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.46  | 18.08             | 18.01  | 23.68  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 152.74 | 222.88            | 225.21 | 297.19 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.19   | 9.85              | 12.04  | 16.50  |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.72   | 14.08             | 13.97  | 18.36  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.12   | 4.52              | 4.48   | 5.89   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.63  | 42.93             | 42.59  | 55.97  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.15  | 43.68             | 43.34  | 56.96  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.14   | 1.65              | 1.63   | 2.15   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.20   | 0.30              | 0.29   | 0.38   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.99              | 0.98   | 1.29   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 328.82 | 476.66            | 473.57 | 622.53 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 300.16 | 435.14            | 432.38 | 568.40 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 329.08 | 477.03            | 473.95 | 623.02 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.62   | 3.80              | 3.77   | 4.95   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.72  | 45.49             | 47.64  | 63.36  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.58   | 0.84              | 0.85   | 1.12   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 146.69 | 212.74            | 211.61 | 278.24 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 144.47 | 209.52            | 208.40 | 274.03 |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 146.69 | 212.74            | 211.61 | 278.24 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 159.63 | 248.91            | 292.13 | 397.54 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 159.63 | 248.91            | 292.13 | 397.54 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 66.20  | 101.58            | 115.33 | 155.95 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.70   | 1.02              | 1.01   | 1.32   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.23   | 3.23              | 3.21   | 4.22   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.71  | 21.31             | 21.15  | 27.79  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.82              | 1.81   | 2.37   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.36  | 23.97             | 28.19  | 38.38  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.26  | 18.04             | 22.31  | 30.65  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.81  | 89.59             | 89.00  | 116.99 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 61.92  | 89.75             | 89.16  | 117.20 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 61.92  | 89.75             | 89.16  | 117.20 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.56  | 22.62             | 22.63  | 29.79  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.51   | 0.73              | 0.73   | 0.95   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 36.49  | 53.00             | 52.92  | 69.65  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 265.56 | 384.88            | 382.19 | 502.34 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 37.41  | 54.20             | 53.78  | 70.67  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.61              | 0.70   | 0.95   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 49.59  | 71.85             | 71.30  | 93.71  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.60              | 0.59   | 0.78   |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.95   | 4.27              | 4.23   | 5.56   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.73   | 2.50              | 2.48   | 3.26   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.61  | 38.17             | 40.60  | 54.19  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 25.61  | 38.17             | 40.60  | 54.19  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 25.61  | 38.17             | 40.60  | 54.19  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.76   | 3.99              | 3.96   | 5.21   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.53  | 15.25             | 15.13  | 19.89  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.15              | 1.14   | 1.50   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.75  | 25.71             | 25.51  | 33.52  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.75  | 25.71             | 25.51  | 33.52  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.75  | 25.71             | 25.51  | 33.52  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 61.33  | 88.85             | 88.15  | 115.84 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 126.66 | 183.50            | 182.06 | 239.24 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 122.67 | 177.72            | 176.32 | 231.71 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 29.39  | 42.63             | 42.41  | 55.77  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 412.76 | 612.13            | 643.49 | 856.54 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 412.76 | 612.13            | 643.49 | 856.54 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 418.90 | 621.03            | 652.31 | 868.14 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.51   | 13.78             | 13.67  | 17.96  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.14   | 5.99              | 5.94   | 7.81   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.51   | 13.78             | 13.67  | 17.96  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.39   | 13.60             | 13.50  | 17.74  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 114.69 | 166.32            | 165.42 | 217.50 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 115.97 | 168.18            | 167.27 | 219.94 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 110.94 | 160.89            | 160.04 | 210.44 |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 76.27  | 110.50            | 109.64 | 144.08 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.83  | 21.48             | 21.32  | 28.01  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.70  | 18.40             | 18.25  | 23.98  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 45.70  | 66.21             | 65.69  | 86.33  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 143.50 | 207.91            | 206.27 | 271.06 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 143.37 | 207.71            | 206.08 | 270.81 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 132.03 | 191.28            | 189.78 | 249.39 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 130.71 | 189.37            | 187.88 | 246.90 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.99   | 2.88              | 2.86   | 3.76   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 26.87  | 39.06             | 39.09  | 51.47  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 101.66 | 147.29            | 146.13 | 192.03 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 101.66 | 147.29            | 146.13 | 192.03 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 91.78  | 132.97            | 131.92 | 173.36 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.07   | 5.98              | 6.18   | 8.19   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.84   | 7.11              | 7.29   | 9.66   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.13  | 50.90             | 50.49  | 66.36  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 45.52  | 65.95             | 65.43  | 85.98  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 370.87 | 538.52            | 537.35 | 707.06 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 378.31 | 549.30            | 548.05 | 721.13 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.81  | 89.64             | 89.15  | 117.22 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 53.62  | 77.77             | 77.38  | 101.75 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 134.11 | 196.08            | 199.12 | 263.05 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.62 | 252.00            | 254.92 | 336.48 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.62 | 252.00            | 254.92 | 336.48 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 82.45  | 119.95            | 120.27 | 158.43 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 17.15  | 25.32             | 26.36  | 35.02  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 249.24 | 361.61            | 360.06 | 473.55 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 244.16 | 354.25            | 352.76 | 463.96 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 244.16 | 354.25            | 352.76 | 463.96 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.51   | 0.74              | 0.73   | 0.96   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.56   | 2.26              | 2.25   | 2.95   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.67   | 2.42              | 2.40   | 3.15   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.58   | 0.84              | 0.84   | 1.10   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.33   | 7.72              | 7.66   | 10.07  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.56  | 48.83             | 60.13  | 82.55  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 7.94   | 12.48             | 14.89  | 20.32  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 24.27  | 35.66             | 36.68  | 48.59  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.18   | 6.52              | 7.69   | 10.47  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.94  | 17.30             | 17.16  | 22.55  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.28   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.88  | 15.77             | 15.65  | 20.56  |



**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 14.16  | 20.51             | 20.35  | 26.75  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 18.04  | 26.14             | 25.94  | 34.08  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 1.92   | 2.96              | 3.39   | 4.59   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 3.03   | 4.57              | 4.99   | 6.70   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.77   | 2.57              | 2.55   | 3.35   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.33              | 0.32   | 0.43   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 33.19  | 48.09             | 47.71  | 62.70  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.77   | 8.36              | 8.30   | 10.90  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 22.02  | 31.90             | 31.65  | 41.59  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 10.16  | 14.72             | 14.61  | 19.20  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 22.44  | 32.51             | 32.25  | 42.38  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.15   | 1.66              | 1.65   | 2.17   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.92   | 2.78              | 2.76   | 3.63   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 27.38  | 39.74             | 39.60  | 52.09  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 45.18  | 65.46             | 64.95  | 85.35  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.07   | 3.00              | 2.98   | 3.91   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.92   | 1.48              | 1.83   | 2.51   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 81.97  | 118.76            | 117.82 | 154.83 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 81.91  | 118.67            | 117.73 | 154.71 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 19.38  | 28.20             | 28.28  | 37.26  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.19   | 3.18              | 3.19   | 4.20     |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.09   | 4.48              | 4.44   | 5.84     |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 58.04  | 84.09             | 83.43  | 109.63   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 40.02  | 57.98             | 57.52  | 75.59    |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.84   | 1.26              | 1.36   | 1.82     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.85   | 1.28              | 1.38   | 1.85     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.56   | 8.06              | 7.99   | 10.50    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 47.55  | 68.96             | 68.58  | 90.17    |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 44.64  | 64.74             | 64.40  | 84.68    |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 62.30  | 90.33             | 89.78  | 118.04   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.48  | 78.93             | 78.31  | 102.91   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.25              | 0.25   | 0.33     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.33  | 16.41             | 16.28  | 21.39    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.74   | 1.08              | 1.08   | 1.42     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 456.10 | 688.69            | 754.70 | 1,013.35 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 455.92 | 688.43            | 754.45 | 1,013.02 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.51   | 3.64              | 3.61   | 4.75     |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.12  | 14.70             | 14.68  | 19.32  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 18.39  | 26.69             | 26.57  | 34.95  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.70   | 2.46              | 2.45   | 3.21   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 10.08  | 14.60             | 14.49  | 19.04  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 12.41  | 17.97             | 17.83  | 23.43  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 12.41  | 17.97             | 17.83  | 23.43  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 12.30  | 17.82             | 17.68  | 23.23  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 7.90   | 12.42             | 14.83  | 20.25  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.51   | 6.53              | 6.48   | 8.52   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 122.23 | 177.08            | 175.69 | 230.87 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 94.32  | 136.65            | 135.57 | 178.15 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 23.57  | 34.15             | 33.88  | 44.53  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.38   | 0.54              | 0.54   | 0.71   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 5.02   | 7.27              | 7.21   | 9.48   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.60   | 3.77              | 3.74   | 4.92   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.99   | 13.03             | 12.93  | 16.99  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 9.48   | 13.74             | 13.63  | 17.91  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 9.48   | 13.74             | 13.63  | 17.91  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.52   | 3.65              | 3.62   | 4.76   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 7.28   | 10.55             | 10.47  | 13.76  |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.87   | 4.16              | 4.12   | 5.42   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.45   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.52   | 8.00              | 7.94   | 10.43  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.03   | 8.74              | 8.67   | 11.39  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.03   | 8.74              | 8.67   | 11.39  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.07   | 3.00              | 2.98   | 3.91   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.60              | 0.60   | 0.78   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.32  | 49.74             | 49.42  | 64.96  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 91.93  | 133.42            | 132.95 | 174.89 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 6.96   | 10.08             | 10.00  | 13.14  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.87  | 16.73             | 19.11  | 25.87  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.87  | 16.73             | 19.11  | 25.87  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.15   | 1.66              | 1.65   | 2.17   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.02   | 1.48              | 1.47   | 1.93   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.64              | 0.63   | 0.83   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.22   | 4.67              | 4.63   | 6.09   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.19   | 4.62              | 4.59   | 6.03   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.50   | 5.07              | 5.03   | 6.60   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 60.55  | 87.73             | 87.04  | 114.38 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 36.77  | 53.27             | 52.85  | 69.45  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 48.11  | 69.71             | 69.16  | 90.88  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 48.11  | 69.71             | 69.16  | 90.88  |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 10.70  | 15.50             | 15.38  | 20.21  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.50   | 5.07              | 5.03   | 6.61   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.40              | 0.39   | 0.52   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.15  | 19.05             | 18.90  | 24.84  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 45.44  | 70.41             | 81.60  | 110.79 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.90   | 2.75              | 2.73   | 3.59   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 38.54  | 60.41             | 71.65  | 97.69  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.88   | 1.28              | 1.27   | 1.67   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.52   | 0.75              | 0.74   | 0.97   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.45   | 2.10              | 2.08   | 2.73   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 25.21  | 36.53             | 36.25  | 47.64  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.21  | 36.53             | 36.25  | 47.64  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 25.21  | 36.53             | 36.25  | 47.64  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 25.21  | 36.53             | 36.25  | 47.64  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.88  | 15.77             | 15.65  | 20.56  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.17  | 45.16             | 44.81  | 58.88  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 76.08  | 110.22            | 109.36   | 143.71   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 77.01  | 111.57            | 110.70   | 145.47   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.72   | 2.49              | 2.48     | 3.25     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 11.31  | 18.11             | 22.38    | 30.74    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 69.26  | 109.86            | 133.38   | 182.64   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.59   | 0.86              | 0.86     | 1.12     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.54   | 0.78              | 0.79     | 1.04     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.54   | 0.78              | 0.79     | 1.04     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 43.92  | 69.20             | 82.92    | 113.28   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.43              | 0.42     | 0.56     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.45   | 6.45              | 6.40     | 8.41     |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 3.61   | 5.23              | 5.19     | 6.82     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.21   | 3.20              | 3.17     | 4.17     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 827.68 | 1,214.52          | 1,244.32 | 1,647.06 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 145.27 | 225.72            | 263.03   | 357.46   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 145.27 | 225.72            | 263.03   | 357.46   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 828.27 | 1,215.37          | 1,245.16 | 1,648.17 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 828.20 | 1,215.27          | 1,245.06 | 1,648.03 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 828.09 | 1,215.11          | 1,244.90 | 1,647.83 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 828.16 | 1,215.21          | 1,245.00 | 1,647.96 |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 827.68 | 1,214.52          | 1,244.32 | 1,647.06 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.04  | 88.44             | 87.75    | 115.32   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 58.86  | 85.28             | 84.63    | 111.21   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.94   | 7.16              | 7.10     | 9.33     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 95.98  | 151.30            | 181.47   | 247.96   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.54  | 16.72             | 16.59    | 21.80    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.54  | 16.72             | 16.59    | 21.80    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.09     | 0.12     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.70  | 32.81             | 39.79    | 54.47    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.26   | 6.17              | 6.12     | 8.04     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.83   | 8.44              | 8.38     | 11.01    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 175.23 | 253.88            | 251.88   | 331.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.75  | 31.51             | 31.26    | 41.08    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.60   | 8.12              | 8.05     | 10.58    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.18   | 3.16              | 3.13     | 4.12     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.86   | 2.89              | 3.35     | 4.55     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 20.35  | 29.48             | 29.25    | 38.43    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.73   | 2.50              | 2.48     | 3.26     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.61   | 6.69              | 6.63     | 8.72     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 49.45  | 72.65             | 74.65  | 98.87  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 56.18  | 82.41             | 84.36  | 111.64 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 65.09  | 95.32             | 97.17  | 128.48 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.64   | 0.92              | 0.91   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.64   | 0.92              | 0.91   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.64   | 0.92              | 0.91   | 1.20   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 80.19  | 116.18            | 115.27 | 151.48 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.67  | 83.55             | 82.89  | 108.93 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 159.21 | 232.26            | 234.51 | 309.41 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.88   | 7.14              | 7.28   | 9.63   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.68   | 6.85              | 6.98   | 9.23   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.59   | 13.90             | 13.82  | 18.17  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.53   | 6.57              | 6.52   | 8.56   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.27   | 1.84              | 1.83   | 2.40   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.75   | 2.53              | 2.51   | 3.30   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |



**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.91   | 2.77              | 2.76     | 3.62     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.19   | 11.86             | 11.77    | 15.46    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25     | 0.33     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.51   | 0.74              | 0.74     | 0.97     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.97   | 1.41              | 1.40     | 1.83     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.01   | 13.06             | 12.96    | 17.03    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.39   | 0.56              | 0.56     | 0.73     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.67   | 5.32              | 5.27     | 6.93     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 90.48  | 131.23            | 130.54   | 171.65   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.39              | 0.39     | 0.51     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 7.13   | 10.33             | 10.25    | 13.47    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.09   | 10.28             | 10.19    | 13.40    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.01   | 1.46              | 1.46     | 1.92     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.18  | 61.19             | 60.91    | 80.10    |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.52   | 0.79              | 0.90     | 1.21     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 27.06  | 39.20             | 38.89    | 51.11    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 780.40 | 1,132.93          | 1,129.84 | 1,486.49 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 430.56 | 624.62            | 621.79   | 817.73   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 783.42 | 1,137.31          | 1,134.20 | 1,492.23 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 781.08 | 1,133.92          | 1,130.84 | 1,487.81 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 780.40 | 1,132.93          | 1,129.84 | 1,486.49 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.67   | 3.88              | 3.87     | 5.09     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.20   | 3.18              | 3.16     | 4.15     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 78.38  | 113.63            | 112.92   | 148.44   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.16     | 0.21     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.68   | 3.88              | 3.85     | 5.06     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.68   | 3.88              | 3.85     | 5.06     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.37   | 1.99              | 1.97     | 2.59     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.92   | 7.13              | 7.08     | 9.30     |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.51   | 13.78             | 13.68    | 17.97    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.75   | 6.88              | 6.83     | 8.97     |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.93   | 2.79              | 2.77     | 3.64     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07     | 0.10     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.13   | 5.99              | 5.94     | 7.80     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.70  | 21.20             | 24.51    | 33.26    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 50.67  | 74.31             | 76.01    | 100.57   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 244.21 | 359.84            | 372.42   | 494.06   |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 244.21 | 359.84            | 372.42 | 494.06 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 370.63 | 542.99            | 554.13 | 732.84 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 348.30 | 510.64            | 522.04 | 690.67 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 167.81 | 243.12            | 241.21 | 316.98 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.99 | 254.97            | 252.96 | 332.42 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.85 | 254.78            | 252.78 | 332.18 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.96   | 4.29              | 4.26   | 5.60   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.31   | 1.90              | 1.88   | 2.48   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 19.27  | 27.92             | 27.70  | 36.40  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.21   | 1.76              | 1.74   | 2.29   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.53   | 13.83             | 13.78  | 18.13  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 94.95  | 137.68            | 136.88 | 179.96 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 94.95  | 137.68            | 136.88 | 179.96 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 86.37  | 125.25            | 124.54 | 163.75 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 86.37  | 125.25            | 124.54 | 163.75 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.49   | 2.15              | 2.14   | 2.81   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 56.04  | 81.24             | 80.73  | 106.13 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 36.27  | 52.71             | 52.71  | 69.39  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-----------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 47.02  | 68.12             | 67.59    | 88.82    |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 4.37   | 6.33              | 6.28     | 8.26     |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 47.06  | 68.36             | 68.28    | 89.87    |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 3.54   | 5.14              | 5.11     | 6.72     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 19.10  | 27.68             | 27.47    | 36.11    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.86   | 1.24              | 1.23     | 1.62     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 66.28  | 96.03             | 95.27    | 125.20   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 111.96 | 162.21            | 160.93   | 211.48   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.21              | 0.21     | 0.28     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 20.96  | 30.38             | 30.15    | 39.62    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 20.96  | 30.38             | 30.15    | 39.62    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 20.96  | 30.38             | 30.15    | 39.62    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.81  | 22.91             | 22.73    | 29.87    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.72   | 2.49              | 2.47     | 3.25     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 67.41  | 97.66             | 96.90    | 127.33   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 21.76  | 31.52             | 31.27    | 41.10    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 21.76  | 31.52             | 31.27    | 41.10    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 25.41  | 36.82             | 36.53    | 48.00    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 824.51 | 1,209.93          | 1,239.76 | 1,641.07 |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 61.65  | 89.35             | 88.73  | 116.62 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.68  | 21.26             | 21.10  | 27.72  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.89   | 7.08              | 7.02   | 9.23   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.75   | 1.08              | 1.07   | 1.41   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.44   | 2.09              | 2.07   | 2.72   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 65.08  | 94.36             | 93.80  | 123.33 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 59.43  | 86.12             | 85.50  | 112.38 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 117.99 | 171.63            | 172.04 | 226.62 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 118.03 | 171.69            | 172.10 | 226.69 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 116.04 | 168.81            | 169.24 | 222.93 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.84  | 17.16             | 17.02  | 22.37  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.11  | 35.86             | 41.67  | 56.60  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 108.58 | 162.32            | 173.87 | 232.36 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 60.41  | 89.90             | 95.29  | 127.06 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 60.41  | 89.90             | 95.29  | 127.06 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 29.38  | 42.57             | 42.25  | 55.52  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 160.56 | 232.64            | 230.86 | 303.40 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 160.96 | 233.23            | 231.44 | 304.16 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 160.71 | 232.87            | 231.09 | 303.69 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 322.95 | 469.28            | 469.11 | 617.53 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 321.37 | 466.99            | 466.84 | 614.54 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 322.95 | 469.28            | 469.11 | 617.53 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 296.05 | 430.30            | 430.44 | 566.72 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 217.25 | 315.83            | 316.13 | 416.26 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 217.25 | 315.83            | 316.13 | 416.26 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 217.25 | 315.83            | 316.13 | 416.26 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 217.19 | 315.75            | 316.05 | 416.16 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 217.19 | 315.75            | 316.05 | 416.16 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.40   | 0.61              | 0.68   | 0.92   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.56              | 0.55   | 0.73   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.68              | 0.68   | 0.89   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.20   | 3.18              | 3.16   | 4.15   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 44.06  | 63.86             | 63.42  | 83.35  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12.17  | 17.63             | 17.49  | 22.98  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 131.85 | 191.02            | 189.52 | 249.05 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.39  | 30.99             | 30.74  | 40.40  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.04   | 8.75              | 8.68   | 11.40  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 6.04   | 8.75              | 8.68   | 11.40  |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.23   | 1.78              | 1.76   | 2.32   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 2.06   | 2.99              | 2.97   | 3.90   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.96   | 2.84              | 2.82   | 3.71   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.85   | 1.23              | 1.22   | 1.60   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 23.77  | 34.44             | 34.17  | 44.90  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 13.93  | 20.18             | 20.03  | 26.32  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 14.35  | 20.79             | 20.62  | 27.10  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 50.80  | 73.60             | 73.02  | 95.96  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 7.76   | 11.24             | 11.15  | 14.65  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.44   | 11.77             | 14.24  | 19.48  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 42.20  | 61.14             | 60.66  | 79.72  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 159.89 | 234.99            | 241.70 | 320.21 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 158.81 | 233.42            | 240.15 | 318.17 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 158.81 | 233.42            | 240.15 | 318.17 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 10.25  | 14.85             | 14.73  | 19.36  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 3.07   | 4.45              | 4.42   | 5.81   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.10   | 8.88              | 8.92   | 11.76  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 6.10   | 8.88              | 8.92   | 11.76  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 6.10   | 8.88              | 8.92   | 11.76  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.72  | 25.68             | 25.50  | 33.52  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 18.55  | 29.55             | 36.19  | 49.64  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 26.02  | 37.70             | 37.40  | 49.15  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.08   | 1.56              | 1.55   | 2.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.46   | 9.35              | 9.28   | 12.20  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.74   | 3.98              | 3.94   | 5.18   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.87   | 7.06              | 7.01   | 9.21   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.44   | 4.99              | 4.95   | 6.50   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 114.71 | 178.45            | 208.43 | 283.38 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.45   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.26   | 0.38              | 0.37   | 0.49   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.12   | 5.97              | 5.92   | 7.78   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 40.50  | 58.67             | 58.21  | 76.50  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.32   | 1.92              | 1.90   | 2.50   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.81   | 2.66              | 2.73   | 3.62   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 19.11  | 27.68             | 27.48  | 36.11  |



**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.92  | 18.71             | 18.57  | 24.40  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 135.26 | 211.29            | 248.87 | 338.91 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 35.67  | 51.76             | 51.54  | 67.79  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.99   | 1.44              | 1.43   | 1.87   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.46   | 9.35              | 9.28   | 12.20  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.68   | 3.89              | 3.86   | 5.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.82   | 4.49              | 5.48   | 7.50   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.61   | 5.65              | 6.69   | 9.11   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.87   | 6.04              | 7.09   | 9.65   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 31.51  | 45.65             | 45.29  | 59.51  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 232.36 | 336.65            | 334.01 | 438.93 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 231.91 | 336.00            | 333.36 | 438.07 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 228.33 | 330.81            | 328.21 | 431.30 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 15.69  | 22.74             | 22.56  | 29.64  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.50   | 6.52              | 6.47   | 8.50   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.56   | 9.99              | 11.14  | 15.01  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.94   | 5.71              | 5.66   | 7.44   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.47  | 18.25             | 18.60  | 24.59  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.47  | 18.25             | 18.60  | 24.59  |

**Table A-18. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.70  | 25.64             | 25.44  | 33.43  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 10.71  | 15.52             | 15.40  | 20.23  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.87   | 2.71              | 2.69   | 3.54   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 5.46   | 7.91              | 7.84   | 10.31  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 22.93  | 33.22             | 32.96  | 43.31  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 17.66  | 25.59             | 25.39  | 33.36  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 43.97  | 63.71             | 63.20  | 83.06  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 9.08   | 13.15             | 13.05  | 17.15  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 7.86   | 11.38             | 11.29  | 14.84  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 50.29  | 62.93             | 62.75  | 75.55  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 236.69 | 292.06            | 290.64 | 348.77 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 200.40 | 247.28            | 246.07 | 295.29 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 105.61 | 135.36            | 135.44 | 164.00 |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.92  | 43.09             | 42.88  | 51.45  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.84  | 15.99             | 15.93  | 19.16  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.45   | 1.85              | 1.86   | 2.25   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.57   | 11.92             | 11.88  | 14.30  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 88.43  | 109.95            | 109.54 | 131.69 |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 109.77 | 136.28            | 135.74 | 163.14 |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 109.77 | 136.28            | 135.74 | 163.14 |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 21.06  | 26.11             | 26.00  | 31.23  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 20.46  | 25.24             | 25.12  | 30.14  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.60  | 20.74             | 20.67  | 24.88  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.02   | 1.30              | 1.30   | 1.57   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.40  | 12.83             | 12.77  | 15.33  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 40.26  | 49.97             | 49.77  | 59.80  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 488.60 | 621.53            | 621.21 | 750.90 |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.68    | 30.92             | 32.28    | 41.76    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.47    | 38.83             | 38.64    | 46.37    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.09    | 12.46             | 12.39    | 14.87    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 95.97    | 118.43            | 117.85   | 141.42   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 97.59    | 120.44            | 119.86   | 143.83   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.68     | 4.54              | 4.52     | 5.42     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.58     | 0.72              | 0.71     | 0.85     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.36     | 2.91              | 2.90     | 3.48     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,063.47 | 1,315.30          | 1,309.33 | 1,572.09 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 970.70   | 1,200.83          | 1,195.42 | 1,435.40 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,064.30 | 1,316.33          | 1,310.36 | 1,573.32 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.44     | 10.42             | 10.37    | 12.44    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 96.16    | 130.09            | 131.12   | 160.69   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.95     | 2.47              | 2.47     | 2.98     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 474.19   | 587.58            | 585.07   | 702.81   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 467.15   | 578.84            | 576.37   | 692.36   |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 474.19 | 587.58            | 585.07   | 702.81   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 452.20 | 764.12            | 790.39   | 1,008.71 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 452.20 | 764.12            | 790.39   | 1,008.71 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 193.51 | 305.13            | 313.30   | 395.36   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.35   | 2.90              | 2.89     | 3.47     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.22   | 8.91              | 8.87     | 10.64    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.62  | 58.77             | 58.48    | 70.18    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.07   | 5.02              | 4.99     | 5.99     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 43.15  | 73.37             | 75.94    | 97.01    |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.16  | 57.33             | 59.98    | 77.86    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 199.93 | 247.20            | 246.07   | 295.44   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 200.20 | 247.54            | 246.40   | 295.83   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 200.20 | 247.54            | 246.40   | 295.83   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 50.29  | 62.93             | 62.75    | 75.55    |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.76   | 2.17              | 2.16     | 2.59     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 118.69 | 147.99            | 147.50   | 177.45   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 859.74 | 1,062.39          | 1,057.44 | 1,269.37 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 121.19 | 149.54            | 148.81   | 178.58   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.05   | 1.73              | 1.78     | 2.27     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12     | 0.14     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 160.46 | 198.08            | 197.13   | 236.58   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.16   | 1.44              | 1.43     | 1.72     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.53     | 11.76             | 11.71    | 14.05    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.70     | 7.04              | 7.00     | 8.40     |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 78.99    | 109.95            | 111.23   | 137.12   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 78.99    | 109.95            | 111.23   | 137.12   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 78.99    | 109.95            | 111.23   | 137.12   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 8.93     | 11.01             | 10.96    | 13.15    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 34.08    | 42.05             | 41.84    | 50.21    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.84     | 2.27              | 2.26     | 2.71     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.44    | 70.88             | 70.54    | 84.64    |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.44    | 70.88             | 70.54    | 84.64    |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.44    | 70.88             | 70.54    | 84.64    |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 198.55   | 244.99            | 243.80   | 292.56   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 411.07   | 507.23            | 504.76   | 605.71   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 398.62   | 491.87            | 489.48   | 587.37   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 94.95    | 117.73            | 117.24   | 140.86   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,285.09 | 1,750.74          | 1,766.23 | 2,167.70 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,285.09 | 1,750.74          | 1,766.23 | 2,167.70 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,305.07 | 1,775.39          | 1,790.76 | 2,197.14 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.79    | 37.99             | 37.80    | 45.36    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.24    | 17.58             | 17.49    | 20.99    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.79    | 37.99             | 37.80    | 45.36    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.50    | 37.63             | 37.45    | 44.94    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 370.80   | 459.40            | 457.44   | 549.47   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 374.80   | 464.37            | 462.38   | 555.41   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 358.52   | 444.28            | 442.39   | 531.42   |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 247.42   | 305.31            | 303.82   | 364.59   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 48.00    | 59.23             | 58.94    | 70.73    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 41.10    | 50.72             | 50.47    | 60.56    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 148.12   | 182.77            | 181.88   | 218.25   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 464.71   | 573.41            | 570.62   | 684.74   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 464.27   | 572.87            | 570.08   | 684.10   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 427.32   | 527.28            | 524.71   | 629.66   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 423.28   | 522.30            | 519.75   | 623.71   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.38     | 7.88              | 7.84     | 9.41     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 86.78    | 108.64            | 108.34   | 130.46   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 329.10   | 406.08            | 404.11   | 484.93   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 329.10   | 406.08            | 404.11   | 484.93   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 297.06   | 366.55            | 364.76   | 437.72   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.83    | 16.93             | 17.01    | 20.73    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.22    | 18.65             | 18.72    | 22.79    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08     | 0.10              | 0.10     | 0.12     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 111.64   | 137.76            | 137.09   | 164.50   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 147.46   | 181.96            | 181.07   | 217.29   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,196.16 | 1,489.99          | 1,484.77 | 1,785.81 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,220.27 | 1,519.73          | 1,514.37 | 1,821.34 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 199.78   | 247.50            | 246.44   | 296.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 173.27 | 214.79            | 213.89 | 256.95   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 427.80 | 548.77            | 549.13 | 665.06   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 552.02 | 703.52            | 703.35 | 850.55   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 552.02 | 703.52            | 703.35 | 850.55   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 247.85 | 311.60            | 310.92 | 374.79   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 59.31  | 78.83             | 79.27  | 96.78    |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 805.10 | 999.35            | 995.34 | 1,196.14 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 788.68 | 979.08            | 975.17 | 1,171.93 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 788.68 | 979.08            | 975.17 | 1,171.93 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.68   | 2.08              | 2.07   | 2.48     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.29   | 6.52              | 6.49   | 7.79     |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.81   | 7.17              | 7.14   | 8.57     |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.90   | 2.34              | 2.33   | 2.80     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.58  | 22.93             | 22.82  | 27.38    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 82.40  | 154.97            | 161.97 | 209.94   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 21.35  | 37.78             | 39.26  | 50.45    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 75.02  | 98.46             | 98.84  | 120.33   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.41  | 19.62             | 20.33  | 26.02    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 38.65  | 47.69             | 47.46  | 56.95    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.51   | 0.63              | 0.63   | 0.75     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 36.12  | 44.57             | 44.35  | 53.23    |



**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 45.84  | 56.56             | 56.28  | 67.54  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 58.76  | 72.51             | 72.16  | 86.59  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 5.29   | 8.62              | 8.88   | 11.26  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 9.04   | 13.24             | 13.48  | 16.78  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.36   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 5.82   | 7.19              | 7.15   | 8.58   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.69   | 0.85              | 0.84   | 1.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 107.45 | 132.59            | 131.94 | 158.33 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.51  | 22.84             | 22.73  | 27.27  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 71.27  | 87.94             | 87.51  | 105.01 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 32.90  | 40.60             | 40.40  | 48.48  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 72.63  | 89.62             | 89.18  | 107.02 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.04   | 4.99              | 4.96   | 5.96   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 6.22   | 7.67              | 7.63   | 9.16   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 87.51  | 108.77            | 108.35 | 130.25 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 146.35 | 180.58            | 179.70 | 215.64 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.03   | 8.67              | 8.63   | 10.35  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.47   | 4.69              | 4.91   | 6.37   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 264.98 | 326.97            | 325.38 | 390.45 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 264.88 | 326.84            | 325.25 | 390.30 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 62.31  | 78.27             | 78.09  | 94.11  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.03     | 8.83              | 8.81     | 10.62    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 10.01    | 12.35             | 12.29    | 14.75    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 187.89   | 231.85            | 230.72   | 276.86   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 129.54   | 159.84            | 159.07   | 190.88   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.46     | 3.54              | 3.60     | 4.47     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.61     | 3.73              | 3.79     | 4.69     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 18.03    | 22.25             | 22.14    | 26.57    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 153.69   | 190.40            | 189.58   | 227.71   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 144.28   | 178.78            | 178.02   | 213.84   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 201.45   | 249.32            | 248.22   | 298.08   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 176.62   | 217.94            | 216.87   | 260.25   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43     | 0.53              | 0.52     | 0.63     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.36     | 0.45              | 0.45     | 0.54     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.36     | 0.45              | 0.45     | 0.54     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 36.66    | 45.24             | 45.02    | 54.02    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.48     | 3.11              | 3.10     | 3.74     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,374.41 | 2,021.85          | 2,059.43 | 2,566.56 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,373.93 | 2,021.26          | 2,058.84 | 2,565.86 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.14     | 10.04             | 9.99     | 11.99    |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 32.63  | 40.69             | 40.56  | 48.80  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 59.32  | 73.63             | 73.34  | 88.13  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 5.88   | 7.26              | 7.22   | 8.67   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 32.90  | 40.59             | 40.40  | 48.47  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 40.16  | 49.55             | 49.31  | 59.17  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 40.16  | 49.55             | 49.31  | 59.17  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 39.96  | 49.31             | 49.07  | 58.88  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 21.13  | 37.51             | 38.99  | 50.13  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 14.60  | 18.02             | 17.93  | 21.52  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.28   | 0.34   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 395.66 | 488.22            | 485.84 | 583.01 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 305.31 | 376.73            | 374.90 | 449.88 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 74.41  | 91.82             | 91.37  | 109.65 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.24   | 1.53              | 1.52   | 1.83   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 16.24  | 20.04             | 19.94  | 23.93  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.48   | 10.50             | 10.45  | 12.55  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 29.82  | 36.80             | 36.62  | 43.95  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 30.66  | 37.83             | 37.65  | 45.18  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 30.66  | 37.83             | 37.65  | 45.18  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.18   | 10.10             | 10.05  | 12.06  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 23.58  | 29.09             | 28.95  | 34.74  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.54   | 11.77             | 11.71  | 14.05  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 0.90              | 0.90   | 1.07   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.87  | 22.05             | 21.94  | 26.33  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.42  | 23.96             | 23.84  | 28.61  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.42  | 23.96             | 23.84  | 28.61  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.03   | 8.67              | 8.63   | 10.35  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.35   | 1.67              | 1.66   | 1.99   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 110.99 | 137.25            | 136.62 | 164.04 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 296.78 | 368.84            | 367.43 | 441.69 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 22.52  | 27.79             | 27.65  | 33.18  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 29.75  | 48.14             | 49.57  | 62.83  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 29.75  | 48.14             | 49.57  | 62.83  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.71   | 4.58              | 4.56   | 5.47   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.59   | 4.43              | 4.41   | 5.29   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.34   | 1.65              | 1.64   | 1.97   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.69  | 14.43             | 14.36  | 17.23  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.62  | 14.34             | 14.27  | 17.13  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.61  | 15.56             | 15.49  | 18.59  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 196.02 | 241.87            | 240.69 | 288.83 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 119.09 | 146.94            | 146.23 | 175.47 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 155.72 | 192.15            | 191.21 | 229.46 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 155.72 | 192.15            | 191.21 | 229.46 |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 34.64  | 42.74             | 42.53  | 51.04  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.08  | 13.67             | 13.61  | 16.33  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.98   | 1.21              | 1.21   | 1.45   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 42.57  | 52.53             | 52.27  | 62.73  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 128.46 | 212.09            | 218.85 | 278.28 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.91   | 7.30              | 7.26   | 8.71   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 105.67 | 183.82            | 190.71 | 244.46 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.48   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.59   | 3.19              | 3.18   | 3.81   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.45   | 1.79              | 1.78   | 2.14   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.97   | 4.90              | 4.88   | 5.85   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 81.62  | 100.73            | 100.24 | 120.29 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 81.62  | 100.73            | 100.24 | 120.29 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 81.62  | 100.73            | 100.24 | 120.29 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 81.62  | 100.73            | 100.24 | 120.29 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 36.12  | 44.57             | 44.35  | 53.23  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 100.91 | 124.52            | 123.91 | 148.69 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 246.76   | 304.49            | 303.01   | 363.61   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 249.50   | 307.87            | 306.38   | 367.65   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.65     | 6.98              | 6.94     | 8.33     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 30.33    | 57.54             | 60.19    | 78.11    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 189.82   | 345.48            | 359.99   | 464.50   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.09     | 2.58              | 2.56     | 3.08     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.45     | 1.85              | 1.86     | 2.25     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.45     | 1.85              | 1.86     | 2.25     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 121.80   | 215.38            | 223.80   | 287.58   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.86     | 1.06              | 1.06     | 1.27     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.44    | 17.82             | 17.73    | 21.28    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.94    | 14.73             | 14.66    | 17.59    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.67     | 8.23              | 8.19     | 9.83     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,628.85 | 3,423.34          | 3,432.79 | 4,171.82 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 411.41   | 685.95            | 708.56   | 902.38   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 411.41   | 685.95            | 708.56   | 902.38   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,630.92 | 3,425.90          | 3,435.34 | 4,174.88 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2,630.71 | 3,425.64          | 3,435.08 | 4,174.56 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,630.28 | 3,425.12          | 3,434.56 | 4,173.94 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,630.57 | 3,425.47          | 3,434.91 | 4,174.36 |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,628.85 | 3,423.34          | 3,432.79 | 4,171.82 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 197.57   | 243.84            | 242.66   | 291.21   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 190.59   | 235.23            | 234.10   | 280.93   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.31    | 20.12             | 20.02    | 24.03    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 264.80   | 469.83            | 488.36   | 627.84   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 37.37    | 46.11             | 45.88    | 55.06    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 37.37    | 46.11             | 45.88    | 55.06    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09     | 0.11              | 0.10     | 0.13     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 56.36    | 102.53            | 106.83   | 137.83   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.37    | 16.50             | 16.42    | 19.70    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.89    | 23.31             | 23.19    | 27.83    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 566.92   | 699.54            | 696.13   | 835.35   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 69.58    | 85.85             | 85.44    | 102.52   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 18.14    | 22.38             | 22.27    | 26.72    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.05     | 8.70              | 8.66     | 10.39    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.38     | 8.86              | 9.14     | 11.62    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 65.86    | 81.27             | 80.88    | 97.05    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.59     | 6.90              | 6.86     | 8.24     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.55    | 19.19             | 19.10    | 22.92    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 156.42 | 204.72            | 205.43 | 249.94 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 178.17 | 231.69            | 232.28 | 282.20 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 207.23 | 267.57            | 267.99 | 325.06 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 259.66 | 320.42            | 318.86 | 382.63 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 186.74 | 230.44            | 229.32 | 275.18 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 510.05 | 648.00            | 647.55 | 782.51 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.55  | 20.09             | 20.12  | 24.41  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 14.87  | 19.20             | 19.23  | 23.33  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 29.54  | 36.56             | 36.40  | 43.71  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.29  | 18.87             | 18.78  | 22.53  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.20   | 5.19              | 5.16   | 6.20   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 0.97              | 0.97   | 1.16   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.41   | 6.67              | 6.64   | 7.97   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |



**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.44     | 7.97              | 7.94     | 9.53     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 26.50    | 32.70             | 32.54    | 39.05    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44     | 0.55              | 0.54     | 0.65     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.68     | 2.08              | 2.07     | 2.48     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.24     | 4.00              | 3.98     | 4.77     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 29.13    | 35.94             | 35.76    | 42.92    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.32     | 1.63              | 1.63     | 1.95     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.13    | 14.97             | 14.90    | 17.88    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 292.42   | 362.41            | 360.88   | 433.52   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.71     | 0.87              | 0.87     | 1.04     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 22.41    | 27.66             | 27.52    | 33.03    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.33    | 27.55             | 27.41    | 32.90    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.09     | 3.84              | 3.83     | 4.60     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 136.20   | 168.98            | 168.29   | 202.21   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.50     | 2.36              | 2.42     | 3.06     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 87.59    | 108.07            | 107.55   | 129.06   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,518.43 | 3,134.11          | 3,122.70 | 3,755.00 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,392.48 | 1,727.73          | 1,720.69 | 2,067.61 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,528.26 | 3,146.33          | 3,134.88 | 3,769.64 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,521.55 | 3,138.04          | 3,126.63 | 3,759.74 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,518.43 | 3,134.11          | 3,122.70 | 3,755.00 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 8.76     | 10.90             | 10.86    | 13.06    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.34     | 9.06              | 9.01     | 10.82    |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 253.78   | 313.99            | 312.58   | 375.35   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.27     | 0.34              | 0.34     | 0.40     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.58     | 10.58             | 10.53    | 12.64    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.58     | 10.58             | 10.53    | 12.64    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.16     | 5.13              | 5.10     | 6.13     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.84    | 19.55             | 19.45    | 23.35    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.80    | 38.00             | 37.82    | 45.38    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 15.30    | 18.88             | 18.79    | 22.55    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.32     | 7.79              | 7.76     | 9.31     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15     | 0.19              | 0.18     | 0.22     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.09    | 16.15             | 16.08    | 19.29    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 40.98    | 66.42             | 68.40    | 86.71    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 160.78   | 208.80            | 209.30   | 254.21   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 768.54   | 1,018.64          | 1,023.91 | 1,249.25 |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 768.54   | 1,018.64          | 1,023.91 | 1,249.25 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,178.83 | 1,524.91          | 1,527.71 | 1,853.81 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,107.15 | 1,436.47          | 1,439.70 | 1,748.19 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 542.32   | 669.19            | 665.93   | 799.11   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 569.26   | 702.43            | 699.01   | 838.81   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 568.84   | 701.91            | 698.49   | 838.19   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29     | 0.36              | 0.35     | 0.42     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.13    | 12.50             | 12.44    | 14.92    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.70     | 5.80              | 5.77     | 6.92     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 63.82    | 78.75             | 78.37    | 94.04    |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.92     | 4.84              | 4.82     | 5.78     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.11    | 36.17             | 36.03    | 43.31    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 306.97   | 380.06            | 378.40   | 454.46   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 306.97   | 380.06            | 378.40   | 454.46   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 279.38   | 346.01            | 344.52   | 413.79   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 279.38   | 346.01            | 344.52   | 413.79   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.81     | 5.94              | 5.91     | 7.09     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 181.88   | 225.02            | 224.01   | 268.99   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 116.74   | 145.94            | 145.51   | 175.16   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 152.21   | 187.82            | 186.90   | 224.28   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 14.49    | 17.88             | 17.80    | 21.36    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 151.75   | 189.35            | 188.73   | 227.09   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 11.10    | 13.76             | 13.70    | 16.45    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 61.83    | 76.35             | 75.98    | 91.20    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.19     | 3.93              | 3.91     | 4.69     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 214.56   | 264.75            | 263.46   | 316.15   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 362.72   | 447.57            | 445.39   | 534.47   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.45     | 0.57              | 0.57     | 0.69     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 67.85    | 83.76             | 83.36    | 100.04   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 67.85    | 83.76             | 83.36    | 100.04   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 67.85    | 83.76             | 83.36    | 100.04   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 50.27    | 62.03             | 61.73    | 74.08    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.15     | 7.59              | 7.55     | 9.07     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 218.21   | 269.26            | 267.95   | 321.54   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 68.46    | 84.47             | 84.06    | 100.87   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 68.46    | 84.47             | 84.06    | 100.87   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 79.96    | 98.67             | 98.19    | 117.83   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2,618.99 | 3,411.18          | 3,420.69 | 4,157.29 |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 199.46 | 246.50            | 245.36 | 294.54 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.51  | 58.62             | 58.34  | 70.01  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.82  | 19.52             | 19.42  | 23.31  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.64   | 4.49              | 4.46   | 5.36   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.67   | 5.76              | 5.73   | 6.88   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 206.06 | 255.13            | 254.01 | 305.07 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 192.29 | 237.54            | 236.42 | 283.78 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 379.98 | 476.92            | 475.77 | 573.27 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 380.06 | 477.02            | 475.87 | 573.40 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 374.53 | 470.17            | 469.05 | 565.21 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 39.07  | 48.21             | 47.97  | 57.57  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 65.01  | 108.00            | 111.52 | 141.94 |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 333.58 | 470.11            | 476.33 | 588.70 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 186.86 | 258.36            | 261.15 | 321.49 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 186.86 | 258.36            | 261.15 | 321.49 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 89.25  | 110.20            | 109.67 | 131.63 |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 519.90 | 641.75            | 638.66 | 766.46 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 520.96 | 643.06            | 639.96 | 768.03 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 520.42   | 642.40            | 639.31   | 767.24   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,041.33 | 1,301.01          | 1,297.01 | 1,561.11 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,036.27 | 1,294.77          | 1,290.80 | 1,553.66 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,041.33 | 1,301.01          | 1,297.01 | 1,561.11 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 953.74   | 1,192.92          | 1,189.45 | 1,432.04 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 702.02   | 878.91            | 876.48   | 1,055.47 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 702.02   | 878.91            | 876.48   | 1,055.47 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 702.02   | 878.91            | 876.48   | 1,055.47 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 701.88   | 878.74            | 876.30   | 1,055.27 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 701.88   | 878.74            | 876.30   | 1,055.27 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.07     | 1.66              | 1.70     | 2.14     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.08     | 1.33              | 1.33     | 1.59     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.53     | 1.88              | 1.87     | 2.25     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.34     | 9.06              | 9.01     | 10.82    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 142.55   | 176.16            | 175.34   | 210.49   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 39.47    | 48.70             | 48.46    | 58.16    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 426.49   | 526.25            | 523.69   | 628.42   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 68.52    | 84.55             | 84.14    | 100.97   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.54    | 24.11             | 23.99    | 28.79    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 19.54    | 24.11             | 23.99    | 28.79    |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.03   | 4.97              | 4.95   | 5.94   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 6.68   | 8.24              | 8.20   | 9.84   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 6.46   | 7.97              | 7.93   | 9.52   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 2.60   | 3.21              | 3.20   | 3.84   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 76.95  | 94.95             | 94.49  | 113.39 |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.81   | 2.23              | 2.22   | 2.67   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 44.53  | 54.95             | 54.68  | 65.62  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 45.90  | 56.63             | 56.36  | 67.63  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 164.46 | 202.93            | 201.94 | 242.33 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 25.81  | 31.85             | 31.69  | 38.03  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 20.42  | 36.86             | 38.38  | 49.46  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 134.60 | 166.10            | 165.29 | 198.35 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 505.35 | 662.62            | 665.08 | 809.51 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 501.85 | 658.31            | 660.78 | 804.35 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 501.85 | 658.31            | 660.78 | 804.35 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 33.17  | 40.93             | 40.73  | 48.88  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.19  | 12.57             | 12.51  | 15.01  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 19.58  | 24.67             | 24.62  | 29.70  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 19.58  | 24.67             | 24.62  | 29.70  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 19.58  | 24.67             | 24.62  | 29.70  |

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 56.09  | 69.31             | 68.99  | 82.81  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 49.87  | 92.89             | 97.00  | 125.57 |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 84.23  | 103.93            | 103.42 | 124.11 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.46   | 4.27              | 4.25   | 5.10   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.90  | 25.79             | 25.66  | 30.80  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.60   | 9.37              | 9.33   | 11.19  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.47  | 19.09             | 18.99  | 22.79  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.14  | 13.74             | 13.68  | 16.41  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 326.56 | 546.15            | 564.33 | 719.04 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.78   | 0.96              | 0.95   | 1.15   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.84   | 1.04              | 1.03   | 1.24   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.57  | 16.74             | 16.66  | 19.99  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 131.28 | 162.00            | 161.21 | 193.45 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.99   | 6.16              | 6.13   | 7.36   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.72   | 7.49              | 7.51   | 9.14   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 61.83  | 76.35             | 75.98  | 91.20  |



**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 41.76  | 51.53             | 51.28  | 61.53    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 381.72 | 650.07            | 672.96 | 859.88   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 115.21 | 143.02            | 142.45 | 171.20   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.39   | 5.42              | 5.39   | 6.47     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.90  | 25.79             | 25.66  | 30.80    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.63   | 0.78              | 0.78   | 0.93     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.62   | 10.64             | 10.59  | 12.71    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.62   | 14.06             | 14.67  | 18.96    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.09  | 17.36             | 18.00  | 23.03    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.85  | 18.38             | 19.02  | 24.29    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 101.99 | 125.85            | 125.23 | 150.28   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 752.24 | 928.23            | 923.71 | 1,108.46 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 750.81 | 926.46            | 921.95 | 1,106.35 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 739.18 | 912.12            | 907.68 | 1,089.22 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 49.82  | 61.48             | 61.18  | 73.41    |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.91  | 18.40             | 18.31  | 21.97    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 21.29  | 31.89             | 32.55  | 40.70    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.26  | 16.36             | 16.28  | 19.54    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 39.66  | 51.17             | 51.24  | 62.14    |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 39.66  | 51.17             | 51.24  | 62.14    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-19. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 57.21  | 70.60             | 70.25  | 84.30  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 35.85  | 44.24             | 44.02  | 52.82  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.41   | 7.91              | 7.87   | 9.44   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 17.74  | 21.89             | 21.78  | 26.14  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 74.22  | 91.58             | 91.14  | 109.36 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 57.17  | 70.54             | 70.20  | 84.24  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 142.34 | 175.64            | 174.78 | 209.74 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 29.49  | 36.39             | 36.22  | 43.46  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 25.26  | 31.17             | 31.02  | 37.22  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 73.11  | 89.26             | 89.00  | 105.45   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 343.36 | 412.70            | 411.33 | 485.59   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 290.67 | 349.36            | 348.21 | 411.07   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 152.56 | 191.32            | 190.93 | 227.60   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 50.65  | 60.88             | 60.68  | 71.63    |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.70  | 25.12             | 25.04  | 29.63    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.45   | 1.84              | 1.83   | 2.19     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.68   | 11.79             | 11.76  | 13.92    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 128.16 | 155.35            | 154.88 | 183.21   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 159.11 | 192.56            | 191.96 | 226.98   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 159.11 | 192.56            | 191.96 | 226.98   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 30.53  | 36.89             | 36.77  | 43.46    |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 29.67  | 35.66             | 35.54  | 41.96    |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 23.48  | 28.61             | 28.53  | 33.78    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.42   | 1.77              | 1.77   | 2.10     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.09  | 18.13             | 18.07  | 21.34    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 58.36  | 70.60             | 70.38  | 83.21    |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 706.41 | 878.40            | 876.36 | 1,042.70 |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.76    | 43.63             | 43.97    | 56.42    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 45.64    | 54.86             | 54.68    | 64.55    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.64    | 17.60             | 17.54    | 20.71    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 139.29   | 167.43            | 166.88   | 197.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 141.55   | 170.16            | 169.60   | 200.23   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.34     | 6.41              | 6.39     | 7.55     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.59     | 0.71              | 0.71     | 0.83     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.89     | 4.67              | 4.66     | 5.50     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,542.12 | 1,858.34          | 1,852.33 | 2,188.08 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,407.56 | 1,696.62          | 1,691.14 | 1,997.79 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,543.30 | 1,859.77          | 1,853.75 | 2,189.76 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.17    | 14.62             | 14.58    | 17.21    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 138.52   | 184.49            | 184.41   | 222.70   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.02     | 3.74              | 3.73     | 4.43     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 687.56   | 830.28            | 827.64   | 978.14   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 677.65   | 818.30            | 815.70   | 964.02   |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 687.56   | 830.28            | 827.64   | 978.14   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 630.81   | 1,082.72          | 1,088.73 | 1,375.16 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 630.81   | 1,082.72          | 1,088.73 | 1,375.16 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 272.60   | 432.12            | 433.78   | 541.02   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.63     | 4.37              | 4.35     | 5.14     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.48    | 12.59             | 12.55    | 14.82    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 69.07    | 83.03             | 82.75    | 97.69    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.90     | 7.09              | 7.07     | 8.34     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 59.76    | 103.51            | 104.10   | 131.67   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 41.29    | 81.31             | 81.98    | 105.55   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 289.92   | 349.27            | 348.13   | 411.20   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 290.06   | 349.43            | 348.30   | 411.40   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 290.06   | 349.43            | 348.30   | 411.40   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 73.11    | 89.26             | 89.00    | 105.45   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.81     | 3.37              | 3.36     | 3.97     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 174.02   | 211.58            | 210.95   | 249.70   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,247.90 | 1,502.32          | 1,497.41 | 1,768.43 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 175.97   | 211.50            | 210.80   | 248.86   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.26     | 2.19              | 2.21     | 2.79     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09     | 0.11              | 0.11     | 0.12     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 232.63   | 279.75            | 278.83   | 329.21   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.27     | 1.53              | 1.53     | 1.80     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.83    | 16.62             | 16.57    | 19.56    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.47     | 10.19             | 10.15    | 11.99    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 113.05   | 155.53            | 155.59   | 189.13   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 113.05   | 155.53            | 155.59   | 189.13   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 113.05   | 155.53            | 155.59   | 189.13   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 12.95    | 15.56             | 15.51    | 18.31    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 49.42    | 59.40             | 59.21    | 69.89    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61     | 0.74              | 0.74     | 0.87     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 83.32    | 100.14            | 99.81    | 117.83   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 83.32    | 100.14            | 99.81    | 117.83   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 83.32    | 100.14            | 99.81    | 117.83   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 288.01   | 346.17            | 345.02   | 407.31   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 597.79   | 718.51            | 716.13   | 845.42   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 580.42   | 697.63            | 695.32   | 820.86   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 137.66   | 166.35            | 165.83   | 196.01   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,844.90 | 2,477.28          | 2,476.75 | 2,995.86 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,844.90 | 2,477.28          | 2,476.75 | 2,995.86 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,874.04 | 2,512.31          | 2,511.67 | 3,037.08 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.65    | 53.67             | 53.49    | 63.15    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 22.50    | 27.04             | 26.95    | 31.82    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.65    | 53.67             | 53.49    | 63.15    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 44.45    | 53.43             | 53.25    | 62.86    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 537.79   | 649.33            | 647.26   | 764.93   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 543.36   | 656.07            | 653.98   | 772.88   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 519.75   | 627.68            | 625.69   | 739.48   |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 359.64   | 432.28            | 430.85   | 508.64   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 69.63    | 83.69             | 83.41    | 98.47    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 59.62    | 71.65             | 71.42    | 84.31    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 215.29   | 258.77            | 257.91   | 304.48   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 674.44   | 810.64            | 807.96   | 953.82   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 673.81   | 809.88            | 807.19   | 952.92   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 619.64   | 744.78            | 742.31   | 876.32   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 614.32   | 738.38            | 735.93   | 868.80   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.15     | 10.99             | 10.96    | 12.93    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 126.13   | 154.07            | 153.63   | 182.05   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 477.34   | 573.73            | 571.83   | 675.07   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 477.34   | 573.73            | 571.83   | 675.07   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 430.75   | 517.74            | 516.02   | 609.18   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.49    | 23.96             | 23.94    | 28.74    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.28    | 23.70             | 23.68    | 28.43    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 156.50   | 188.11            | 187.48   | 221.33   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 214.19   | 257.45            | 256.59   | 302.92   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,733.24 | 2,105.32          | 2,099.00 | 2,484.06 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,768.21 | 2,147.34          | 2,140.88 | 2,533.51 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 289.65   | 349.70            | 348.58   | 411.95   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 251.20   | 303.48            | 302.52   | 357.57   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 618.32   | 776.07            | 774.48   | 923.41   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 798.31   | 994.73            | 992.48   | 1,181.41 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 798.31   | 994.73            | 992.48   | 1,181.41 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 307.65   | 378.81            | 377.82   | 448.53   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 103.17   | 132.92            | 132.74   | 159.17   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,167.14 | 1,412.14          | 1,407.74 | 1,664.47 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,143.31 | 1,383.50          | 1,379.19 | 1,630.77 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,143.31 | 1,383.50          | 1,379.19 | 1,630.77 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.49     | 2.99              | 2.98     | 3.52     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.35     | 10.03             | 10.00    | 11.80    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.32     | 11.20             | 11.16    | 13.18    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.79     | 3.35              | 3.34     | 3.94     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 29.90    | 35.94             | 35.82    | 42.28    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 113.34   | 220.13            | 221.89   | 285.18   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03     | 0.03              | 0.03     | 0.04     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 28.42    | 52.16             | 52.52    | 66.99    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 105.43   | 135.98            | 135.80   | 162.88   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.30    | 27.10             | 27.27    | 34.61    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 56.06    | 67.38             | 67.16    | 79.28    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.90     | 1.08              | 1.08     | 1.27     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 54.06    | 64.98             | 64.77    | 76.46    |



**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 66.48  | 79.91             | 79.64  | 94.02  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 86.80  | 104.34            | 104.00 | 122.78 |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 6.98   | 11.68             | 11.74  | 14.76  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 12.65  | 18.49             | 18.53  | 22.78  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.38              | 0.37   | 0.44   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 8.57   | 10.30             | 10.26  | 12.12  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.93   | 1.12              | 1.12   | 1.32   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 155.85 | 187.32            | 186.70 | 220.41 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 26.56  | 31.92             | 31.81  | 37.56  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 103.37 | 124.24            | 123.83 | 146.19 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 47.72  | 57.35             | 57.16  | 67.49  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 105.34 | 126.62            | 126.20 | 148.98 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.58   | 7.91              | 7.88   | 9.31   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 9.02   | 10.84             | 10.80  | 12.75  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 125.38 | 151.93            | 151.46 | 179.15 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 212.40 | 255.30            | 254.45 | 300.39 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.85  | 13.04             | 13.00  | 15.35  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.38   | 6.66              | 6.71   | 8.64   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 383.52 | 460.97            | 459.44 | 542.39 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 383.59 | 461.06            | 459.53 | 542.49 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 90.21  | 110.61            | 110.30 | 130.82 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.17    | 12.48             | 12.44    | 14.76    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 14.52    | 17.45             | 17.39    | 20.53    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 272.56   | 327.60            | 326.51   | 385.46   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 187.89   | 225.83            | 225.09   | 265.72   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.25     | 4.71              | 4.72     | 5.79     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.75     | 5.31              | 5.32     | 6.50     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 26.20    | 31.49             | 31.39    | 37.06    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 222.83   | 269.01            | 268.15   | 316.89   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 209.17   | 252.60            | 251.80   | 297.58   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 292.09   | 352.26            | 351.13   | 414.86   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 256.68   | 308.52            | 307.50   | 363.01   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.55     | 0.66              | 0.65     | 0.77     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.52     | 0.62              | 0.62     | 0.73     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.52     | 0.62              | 0.62     | 0.73     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 53.18    | 63.92             | 63.70    | 75.21    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.74     | 4.58              | 4.57     | 5.41     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,953.85 | 2,861.52          | 2,867.21 | 3,526.96 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,953.28 | 2,860.84          | 2,866.53 | 3,526.15 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.80    | 14.18             | 14.14    | 16.69    |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 47.27  | 57.50             | 57.33  | 67.87  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 85.78  | 103.78            | 103.46 | 122.33 |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 48.11  | 57.83             | 57.63  | 68.04  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 58.25  | 70.01             | 69.78  | 82.38  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 58.25  | 70.01             | 69.78  | 82.38  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 58.17  | 69.92             | 69.69  | 82.27  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 27.95  | 51.60             | 51.96  | 66.33  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 21.21  | 25.49             | 25.41  | 30.00  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 573.88 | 689.77            | 687.49 | 811.60 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 442.83 | 532.26            | 530.50 | 626.27 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 104.62 | 125.75            | 125.33 | 147.96 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.23   | 2.68              | 2.67   | 3.16   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 23.55  | 28.31             | 28.21  | 33.31  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 12.45  | 15.02             | 14.97  | 17.69  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 44.55  | 53.55             | 53.37  | 63.00  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 44.33  | 53.28             | 53.10  | 62.69  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 44.33  | 53.28             | 53.10  | 62.69  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.93  | 14.34             | 14.29  | 16.87  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 34.19  | 41.10             | 40.96  | 48.36  |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.64  | 17.60             | 17.54  | 20.71  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.94   | 1.13              | 1.13   | 1.33   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 25.92  | 31.15             | 31.05  | 36.66  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 27.90  | 33.54             | 33.43  | 39.46  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.90  | 33.54             | 33.43  | 39.46  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.85  | 13.04             | 13.00  | 15.35  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.98   | 2.38              | 2.38   | 2.80   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 160.95 | 193.92            | 193.29 | 228.31 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 430.12 | 521.14            | 519.54 | 614.49 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 32.66  | 39.26             | 39.13  | 46.19  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 38.93  | 64.80             | 65.12  | 81.86  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 38.93  | 64.80             | 65.12  | 81.86  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.38   | 6.47              | 6.45   | 7.61   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.67   | 6.81              | 6.79   | 8.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.79   | 2.15              | 2.15   | 2.53   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.63  | 24.79             | 24.71  | 29.17  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 20.63  | 24.80             | 24.72  | 29.18  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.77  | 26.16             | 26.07  | 30.78  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 284.31 | 341.72            | 340.59 | 402.08 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.85 | 207.76            | 207.07 | 244.45 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 225.79 | 271.39            | 270.49 | 319.33 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 225.79 | 271.39            | 270.49 | 319.33 |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 50.25  | 60.40             | 60.20  | 71.07  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.59  | 18.74             | 18.68  | 22.05  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.35   | 5.23              | 5.21   | 6.15   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 61.75  | 74.22             | 73.97  | 87.32  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 176.31 | 296.23            | 297.74 | 374.85 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.12   | 9.76              | 9.73   | 11.49  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 142.32 | 255.15            | 256.79 | 326.44 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.14   | 3.77              | 3.76   | 4.44   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.11   | 2.49   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.13   | 4.97              | 4.95   | 5.84   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 118.38 | 142.31            | 141.84 | 167.45 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 118.38 | 142.31            | 141.84 | 167.45 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 118.38 | 142.31            | 141.84 | 167.45 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 118.38 | 142.31            | 141.84 | 167.45 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 54.06  | 64.98             | 64.77  | 76.46  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 146.36 | 175.92            | 175.34 | 206.99 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 358.61   | 431.05            | 429.62   | 507.19   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 362.19   | 435.35            | 433.91   | 512.25   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.39     | 10.08             | 10.05    | 11.86    |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 41.56    | 81.63             | 82.30    | 105.93   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 262.58   | 490.76            | 494.31   | 632.06   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.43     | 4.12              | 4.11     | 4.85     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.45     | 1.84              | 1.83     | 2.19     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.45     | 1.84              | 1.83     | 2.19     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 168.75   | 305.29            | 307.31   | 391.17   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.01     | 1.21              | 1.21     | 1.43     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.01    | 25.25             | 25.17    | 29.71    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 17.75    | 21.33             | 21.26    | 25.10    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.82     | 10.60             | 10.56    | 12.47    |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,799.99 | 4,850.03          | 4,842.32 | 5,794.83 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 570.10   | 965.93            | 971.03   | 1,224.08 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 570.10   | 965.93            | 971.03   | 1,224.08 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3,803.31 | 4,854.02          | 4,846.30 | 5,799.53 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3,803.06 | 4,853.72          | 4,846.00 | 5,799.17 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,802.29 | 4,852.80          | 4,845.08 | 5,798.08 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,802.80 | 4,853.40          | 4,845.68 | 5,798.80 |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,799.99 | 4,850.03          | 4,842.32 | 5,794.83 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 286.55   | 344.51            | 343.37   | 405.38   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 276.58   | 332.51            | 331.41   | 391.27   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 24.28    | 29.19             | 29.09    | 34.34    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 363.99   | 662.74            | 667.20   | 850.03   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 54.20    | 65.14             | 64.93    | 76.65    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 54.20    | 65.14             | 64.93    | 76.65    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 77.09    | 144.54            | 145.60   | 186.26   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.61    | 22.37             | 22.30    | 26.32    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 27.45    | 32.99             | 32.88    | 38.82    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 821.91   | 987.89            | 984.61   | 1,162.37 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 99.47    | 119.56            | 119.16   | 140.68   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 26.30    | 31.62             | 31.51    | 37.20    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.23    | 12.30             | 12.26    | 14.47    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.69     | 12.75             | 12.81    | 16.10    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 95.53    | 114.82            | 114.44   | 135.11   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.11     | 9.74              | 9.71     | 11.46    |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 23.68    | 28.46             | 28.36    | 33.48    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 225.45 | 289.42            | 289.00 | 346.29   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 256.98 | 327.52            | 326.98 | 391.18   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 299.44 | 378.60            | 377.89 | 451.29   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.31   | 1.57              | 1.57   | 1.85     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.31   | 1.57              | 1.57   | 1.85     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.31   | 1.57              | 1.57   | 1.85     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 376.77 | 452.87            | 451.37 | 532.86   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 270.99 | 325.73            | 324.65 | 383.27   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 738.25 | 916.68            | 914.51 | 1,087.74 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 22.51  | 28.48             | 28.43  | 33.95    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 21.45  | 27.14             | 27.09  | 32.36    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 39.96  | 48.21             | 48.06  | 56.78    |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.31  | 28.02             | 27.92  | 32.97    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.26   | 7.53              | 7.50   | 8.86     |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.27   | 1.53              | 1.53   | 1.80     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.36   | 8.84              | 8.81   | 10.41    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.06   | 0.08              | 0.08   | 0.09     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.09     |



**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.87     | 11.90             | 11.86    | 14.01    |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 38.44    | 46.20             | 46.05    | 54.36    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.38     | 0.46              | 0.46     | 0.54     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.49     | 2.99              | 2.98     | 3.52     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.86     | 5.85              | 5.83     | 6.88     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 42.14    | 50.65             | 50.48    | 59.59    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.20     | 2.64              | 2.63     | 3.11     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.09    | 21.74             | 21.67    | 25.58    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 423.98   | 512.10            | 510.47   | 603.32   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.78     | 0.94              | 0.94     | 1.11     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 30.84    | 37.07             | 36.95    | 43.62    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.79    | 37.00             | 36.88    | 43.54    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.16     | 5.03              | 5.02     | 5.93     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 197.35   | 238.65            | 237.90   | 281.25   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.09     | 3.31              | 3.32     | 4.14     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 127.03   | 152.68            | 152.18   | 179.65   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,650.97 | 4,430.05          | 4,416.61 | 5,225.56 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2,021.96 | 2,445.25          | 2,437.59 | 2,881.82 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,665.40 | 4,447.53          | 4,434.04 | 5,246.17 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3,657.55 | 4,438.10          | 4,424.64 | 5,235.08 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,650.97 | 4,430.05          | 4,416.61 | 5,225.56 |
| NJ portion of the Northeast<br>Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 13.03    | 15.80             | 15.75    | 18.64    |
| Nogales, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.01    | 13.23             | 13.19    | 15.57    |
| Norfolk-Virginia Beach-Newport News (Hampton)   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 368.63   | 444.41            | 442.98   | 523.33   |
| Oakridge, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.24     | 0.29              | 0.29     | 0.35     |
| Ogden Area, UT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.26    | 14.74             | 14.69    | 17.34    |
| Ogden Area, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.26    | 14.74             | 14.69    | 17.34    |
| Olmsted County; (part), MN  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.60     | 6.73              | 6.71     | 7.92     |
| Olmsted; City of Rochester, MN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.83    | 27.44             | 27.35    | 32.29    |
| Parkersburg-Marietta, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 44.67    | 53.69             | 53.51    | 63.17    |
| Parkersburg-Marietta, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 22.19    | 26.67             | 26.59    | 31.39    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                          | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.31     | 11.19             | 11.15    | 13.16    |
| Penns Grove Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19     | 0.22              | 0.22     | 0.26     |
| Peoria County: Peoria, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.41    | 22.13             | 22.06    | 26.04    |
| Perth Amboy Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 60.60    | 97.80             | 98.21    | 122.85   |
| Philadelphia-Camden County Area, PA-NJ  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 231.93   | 295.17            | 294.67   | 352.41   |
| Philadelphia-Wilmington, PA-NJ-DE   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,106.16 | 1,440.25          | 1,438.75 | 1,729.16 |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,106.16 | 1,440.25          | 1,438.75 | 1,729.16 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,702.17 | 2,156.62          | 2,152.75 | 2,572.07 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,599.30 | 2,032.98          | 2,029.52 | 2,426.58 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 785.21   | 943.77            | 940.65   | 1,110.47 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 825.16   | 991.79            | 988.51   | 1,166.97 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 824.55   | 991.06            | 987.78   | 1,166.11 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33     | 0.40              | 0.40     | 0.47     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.58    | 18.73             | 18.66    | 22.03    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.94     | 9.55              | 9.51     | 11.23    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 94.42    | 113.48            | 113.11   | 133.53   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.69     | 6.84              | 6.81     | 8.04     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 38.11    | 46.18             | 46.04    | 54.45    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 445.07   | 536.99            | 535.27   | 632.47   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 445.07   | 536.99            | 535.27   | 632.47   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 405.40   | 489.30            | 487.74   | 576.35   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 405.40   | 489.30            | 487.74   | 576.35   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.98     | 8.39              | 8.36     | 9.87     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 264.82   | 319.25            | 318.22   | 375.93   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 168.90   | 205.99            | 205.39   | 243.30   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 220.77   | 265.35            | 264.47   | 312.22   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 21.70    | 26.08             | 25.99    | 30.69    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 220.01   | 267.75            | 266.96   | 316.08   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 15.64    | 18.89             | 18.83    | 22.25    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 89.67    | 107.87            | 107.51   | 126.95   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 311.20   | 374.05            | 372.81   | 440.12   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 526.56   | 632.90            | 630.80   | 744.69   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.63     | 0.79              | 0.78     | 0.93     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 98.41    | 118.34            | 117.95   | 139.26   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 98.41    | 118.34            | 117.95   | 139.26   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 98.41    | 118.34            | 117.95   | 139.26   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 71.39    | 85.81             | 85.53    | 100.97   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.08    | 13.31             | 13.27    | 15.66    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 316.50   | 380.42            | 379.16   | 447.61   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 96.43    | 115.90            | 115.51   | 136.37   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 96.43    | 115.90            | 115.51   | 136.37   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 112.64   | 135.38            | 134.94   | 159.30   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3,786.30 | 4,833.58          | 4,825.93 | 5,775.47 |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 289.32 | 348.34            | 347.20 | 410.05   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 68.91  | 82.83             | 82.55  | 97.46    |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 22.94  | 27.58             | 27.48  | 32.45    |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.22   | 8.68              | 8.65   | 10.22    |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.77   | 8.14              | 8.11   | 9.57     |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 289.92 | 349.84            | 348.72 | 412.06   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 278.87 | 335.61            | 334.51 | 395.02   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 551.38 | 675.41            | 673.55 | 798.66   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 551.44 | 675.48            | 673.61 | 798.74   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 544.84 | 667.51            | 665.67 | 789.36   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 57.89  | 69.58             | 69.35  | 81.87    |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 88.97  | 150.68            | 151.47 | 190.93   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 477.36 | 665.86            | 666.38 | 812.19   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 267.65 | 365.45            | 365.53 | 443.64   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 267.65 | 365.45            | 365.53 | 443.64   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 119.38 | 143.59            | 143.12 | 168.99   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 754.44 | 907.17            | 904.18 | 1,067.52 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 755.53 | 908.48            | 905.48 | 1,069.06 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 755.25   | 908.14            | 905.15   | 1,068.67 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,510.61 | 1,840.99          | 1,835.64 | 2,174.05 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,502.89 | 1,831.71          | 1,826.39 | 2,163.14 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,510.61 | 1,840.99          | 1,835.64 | 2,174.05 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,382.65 | 1,687.19          | 1,682.35 | 1,993.09 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1,020.82 | 1,246.92          | 1,243.38 | 1,473.38 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,020.82 | 1,246.92          | 1,243.38 | 1,473.38 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,020.82 | 1,246.92          | 1,243.38 | 1,473.38 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,020.67 | 1,246.74          | 1,243.20 | 1,473.17 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,020.67 | 1,246.74          | 1,243.20 | 1,473.17 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.28     | 2.07              | 2.08     | 2.61     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.35     | 1.62              | 1.62     | 1.91     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.21     | 2.66              | 2.65     | 3.13     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 11.01    | 13.23             | 13.19    | 15.57    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 206.72   | 248.89            | 248.08   | 292.98   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 57.38    | 68.97             | 68.74    | 81.15    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 617.99   | 742.79            | 740.33   | 873.99   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 98.14    | 117.96            | 117.57   | 138.79   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 28.34    | 34.06             | 33.95    | 40.08    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 28.34    | 34.06             | 33.95    | 40.08    |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-----------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
|   |                             | Moderate                                     |   |  |        |                   |        |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 5.95   | 7.15              | 7.13   | 8.41     |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 9.69   | 11.64             | 11.61  | 13.70    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 9.58   | 11.51             | 11.47  | 13.54    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.51   | 4.22              | 4.21   | 4.97     |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 111.61 | 134.15            | 133.71 | 157.85   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.80   | 3.37              | 3.36   | 3.96     |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 63.59  | 76.44             | 76.18  | 89.94    |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 65.60  | 78.84             | 78.58  | 92.77    |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 238.53 | 286.70            | 285.75 | 337.34   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 38.89  | 46.74             | 46.59  | 55.00    |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 28.20  | 52.26             | 52.63  | 67.21    |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 191.10 | 229.71            | 228.95 | 270.29   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 728.22 | 936.77            | 935.49 | 1,121.41 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 723.15 | 930.67            | 929.41 | 1,114.23 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 723.15 | 930.67            | 929.41 | 1,114.23 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 48.11  | 57.83             | 57.64  | 68.04    |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 15.57  | 18.72             | 18.66  | 22.02    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 28.34  | 34.86             | 34.77  | 41.27    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 28.34  | 34.86             | 34.77  | 41.27    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 28.34  | 34.86             | 34.77  | 41.27    |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 79.05  | 95.16             | 94.85  | 112.02 |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 67.81  | 130.88            | 131.91 | 169.39 |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 122.17 | 146.84            | 146.35 | 172.77 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.98   | 5.98              | 5.96   | 7.04   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.31  | 36.43             | 36.31  | 42.87  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.51   | 9.03              | 9.00   | 10.63  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 21.95  | 26.38             | 26.30  | 31.04  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 16.16  | 19.42             | 19.35  | 22.85  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 456.37 | 773.97            | 778.07 | 980.97 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.15   | 1.39              | 1.38   | 1.63   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.21   | 1.46              | 1.45   | 1.71   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.15  | 24.22             | 24.14  | 28.50  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 190.73 | 229.24            | 228.49 | 269.74 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.16   | 11.01             | 10.98  | 12.96  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.24   | 10.58             | 10.57  | 12.66  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 89.67  | 107.87            | 107.51 | 126.95 |



**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 60.49    | 72.70             | 72.46    | 85.55    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 531.73   | 921.00            | 926.28   | 1,171.57 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 167.00   | 202.08            | 201.45   | 238.20   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.31    | 36.43             | 36.31    | 42.87    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.88     | 1.05              | 1.05     | 1.24     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.38    | 14.88             | 14.83    | 17.51    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.30    | 19.69             | 19.84    | 25.45    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.85    | 24.36             | 24.51    | 31.07    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 14.76    | 25.56             | 25.71    | 32.52    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 147.93   | 177.80            | 177.21   | 209.20   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,091.17 | 1,311.56          | 1,307.22 | 1,543.23 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,089.15 | 1,309.13          | 1,304.79 | 1,540.37 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,072.25 | 1,288.82          | 1,284.55 | 1,516.47 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 70.64    | 84.90             | 84.62    | 99.90    |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.49    | 27.03             | 26.95    | 31.81    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 35.99    | 52.10             | 52.19    | 64.06    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.88    | 23.90             | 23.82    | 28.12    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.26    | 72.33             | 72.19    | 86.19    |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 57.26    | 72.33             | 72.19    | 86.19    |

**Table A-20. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 82.86  | 99.60             | 99.27  | 117.19 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 54.41  | 65.40             | 65.18  | 76.95  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 9.89   | 11.89             | 11.85  | 13.99  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 25.86  | 31.08             | 30.98  | 36.57  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 107.65 | 129.39            | 128.96 | 152.24 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 82.92  | 99.67             | 99.34  | 117.27 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 206.45 | 248.15            | 247.32 | 291.98 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 42.94  | 51.61             | 51.44  | 60.72  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 36.37  | 43.71             | 43.57  | 51.43  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-21. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.93   | 2.75              | 2.75   | 3.58   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.63   | 2.33              | 2.33   | 3.03   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.48   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.41              | 0.41   | 0.53   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.71   | 1.01              | 1.01   | 1.32   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.88   | 1.26              | 1.26   | 1.64   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.88   | 1.26              | 1.26   | 1.64   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.46   | 0.60   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.78   | 5.41              | 5.43   | 7.08   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.45   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.13              | 1.13   | 1.47   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.62   | 12.31             | 12.30  | 16.00  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.86   | 11.23             | 11.23  | 14.60  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.62   | 12.32             | 12.31  | 16.01  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.64   | 0.92              | 0.92   | 1.19   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.83   | 5.47              | 5.47   | 7.11   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.77   | 5.39              | 5.38   | 7.00   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.83   | 5.47              | 5.47   | 7.11   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.17   | 1.67              | 1.66   | 2.17   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.17   | 1.67              | 1.66   | 2.17   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.82   | 1.20              | 1.24   | 1.65   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.31   | 3.01   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.97   | 9.96              | 9.96   | 12.95  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.99   | 1.41              | 1.41   | 1.83   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.30   | 1.86              | 1.86   | 2.42   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.06   | 0.08   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.51   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.62   | 2.31              | 2.31   | 3.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.34   | 4.77              | 4.76   | 6.19   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.23   | 4.62              | 4.61   | 6.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.77   | 1.09              | 1.09   | 1.42   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 8.44   | 12.06             | 12.05  | 15.67  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.44   | 12.06             | 12.05  | 15.67  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.60   | 12.29             | 12.28  | 15.97  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.99   | 4.28              | 4.27   | 5.56   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.03   | 4.32              | 4.32   | 5.62   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.89   | 4.13              | 4.13   | 5.37   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.01   | 2.87              | 2.87   | 3.73   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.56              | 0.56   | 0.73   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.33   | 0.48              | 0.48   | 0.62   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.20   | 1.72              | 1.72   | 2.24   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.78   | 5.40              | 5.40   | 7.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.78   | 5.39              | 5.39   | 7.01   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.48   | 4.97              | 4.97   | 6.46   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.44   | 4.92              | 4.92   | 6.39   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.27   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.68   | 3.83              | 3.82   | 4.97   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.68   | 3.83              | 3.82   | 4.97   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.42   | 3.45              | 3.45   | 4.49   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.93   | 1.32              | 1.32   | 1.72   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.23   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 9.56   | 13.66             | 13.65  | 17.75  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.76   | 13.94             | 13.93  | 18.12  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 2.31              | 2.30   | 3.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.40   | 2.00              | 2.00   | 2.60   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.22   | 4.61              | 4.60   | 5.99   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.22   | 6.02              | 6.02   | 7.83   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.22   | 6.02              | 6.02   | 7.83   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.09   | 2.98              | 2.98   | 3.88   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.48   | 9.26              | 9.25   | 12.03  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.35   | 9.07              | 9.06   | 11.78  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 6.35   | 9.07              | 9.06   | 11.78  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |



**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.48   | 0.68              | 0.68   | 0.88   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.87   | 1.25              | 1.25   | 1.62   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.58   | 0.83              | 0.83   | 1.08   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.27   | 0.38              | 0.38   | 0.50   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.59   | 0.84              | 0.84   | 1.10   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.71   | 1.01              | 1.01   | 1.32   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.19   | 1.70              | 1.70   | 2.21   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 2.16   | 3.08              | 3.08   | 4.01   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 2.16   | 3.08              | 3.08   | 4.01   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.49   | 0.70              | 0.70   | 0.91   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.53   | 2.18              | 2.18   | 2.84   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.05   | 1.51              | 1.51   | 1.96   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.24   | 1.77              | 1.77   | 2.30   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.16   | 1.66              | 1.66   | 2.16   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.63   | 2.33              | 2.33   | 3.03   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.44   | 2.05              | 2.05   | 2.66   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.55   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.44   | 10.74             | 10.91  | 14.33  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.43   | 10.73             | 10.90  | 14.32  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.48   | 0.68              | 0.68   | 0.89   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.32   | 0.46              | 0.46   | 0.60   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.22   | 4.60              | 4.60   | 5.98   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.48   | 3.55              | 3.55   | 4.61   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.62   | 0.89              | 0.89   | 1.15   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.27              | 0.27   | 0.36   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.90   | 1.29              | 1.28   | 1.67   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.38   | 3.40              | 3.40   | 4.42   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.59   | 2.28              | 2.28   | 2.96   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.97   | 1.38              | 1.38   | 1.80   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.27   | 1.81              | 1.81   | 2.35   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.27   | 1.81              | 1.81   | 2.35   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.35   | 0.49              | 0.49   | 0.64   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.17              | 1.17   | 1.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.00   | 2.86              | 2.86   | 3.72   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.03   | 2.90              | 2.90   | 3.77   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.30   | 0.39   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.59  | 28.21             | 28.53  | 37.36  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.63   | 2.55              | 2.89   | 4.02   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.63   | 2.55              | 2.89   | 4.02   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 19.60  | 28.23             | 28.55  | 37.39  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 19.60  | 28.23             | 28.55  | 37.39  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 19.60  | 28.22             | 28.55  | 37.38  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 19.60  | 28.22             | 28.55  | 37.39  |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.59  | 28.21             | 28.53  | 37.36  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 2.30              | 2.29   | 2.98   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.63              | 0.64   | 0.84   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.62   | 6.59              | 6.59   | 8.57   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.54   | 0.77              | 0.77   | 1.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.14   | 1.63              | 1.64   | 2.13   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.31   | 1.88              | 1.89   | 2.46   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.55   | 2.22              | 2.22   | 2.89   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.11   | 3.02              | 3.02   | 3.92   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.52   | 2.17              | 2.17   | 2.82   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.95   | 5.66              | 5.68   | 7.40   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.36   | 3.37              | 3.37   | 4.38   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.10   | 1.57              | 1.57   | 2.04   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 1.02              | 1.02   | 1.32   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 20.16  | 28.81             | 28.79  | 37.44  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 11.20  | 16.00             | 15.99  | 20.80  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 20.24  | 28.92             | 28.91  | 37.59  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 20.18  | 28.83             | 28.82  | 37.47  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 20.16  | 28.81             | 28.79  | 37.44  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.05   | 2.93              | 2.93   | 3.81   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.23   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.40   | 7.71              | 7.70   | 10.02  |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.40   | 7.71              | 7.70   | 10.02  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.73   | 12.47             | 12.46  | 16.20  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.14   | 11.63             | 11.62  | 15.11  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.42   | 6.31              | 6.31   | 8.21   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.64   | 6.62              | 6.62   | 8.61   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.63   | 6.62              | 6.61   | 8.60   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.51   | 0.73              | 0.72   | 0.94   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.48   | 3.55              | 3.54   | 4.61   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.48   | 3.55              | 3.54   | 4.61   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.26   | 3.22              | 3.22   | 4.19   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.26   | 3.22              | 3.22   | 4.19   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.72   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.93   | 1.32              | 1.32   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.24   | 1.77              | 1.77   | 2.30   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.21   | 1.73              | 1.73   | 2.24   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.75   | 2.49              | 2.49   | 3.24   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.95   | 4.21              | 4.21   | 5.48   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.42   | 0.60              | 0.59   | 0.77   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.78   | 2.54              | 2.54   | 3.30   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.67   | 0.96              | 0.96   | 1.24   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 19.51  | 28.09             | 28.41  | 37.21  |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.62   | 2.31              | 2.31   | 3.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.70   | 2.43              | 2.43   | 3.16   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.56   | 2.23              | 2.23   | 2.90   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.99   | 4.27              | 4.27   | 5.56   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.99   | 4.27              | 4.27   | 5.56   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.94   | 4.20              | 4.20   | 5.46   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.20   | 0.28              | 0.28   | 0.37   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.00   | 2.85              | 2.85   | 3.71   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.77   | 1.10              | 1.10   | 1.43   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.23   | 6.04              | 6.03   | 7.85   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.24   | 6.05              | 6.05   | 7.87   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.23   | 6.04              | 6.04   | 7.85   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.32   | 11.91             | 11.94  | 15.55  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.28   | 11.85             | 11.88  | 15.47  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.32   | 11.91             | 11.94  | 15.55  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.61   | 10.89             | 10.93  | 14.24  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 5.54   | 7.91              | 7.91   | 10.28  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 5.54   | 7.91              | 7.91   | 10.28  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 5.54   | 7.91              | 7.91   | 10.28  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.54   | 7.91              | 7.91   | 10.28  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.54   | 7.91              | 7.91   | 10.28  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.16   | 1.65              | 1.65   | 2.15   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.46              | 0.46   | 0.60   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.47   | 4.96              | 4.96   | 6.45   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.63   | 0.89              | 0.89   | 1.16   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.37   | 0.52              | 0.52   | 0.68   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.38   | 0.54              | 0.54   | 0.70   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.34   | 1.91              | 1.91   | 2.48   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.09   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.11   | 1.59              | 1.59   | 2.06   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.64   | 5.20              | 5.19   | 6.75   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.61   | 5.15              | 5.15   | 6.70   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.61   | 5.15              | 5.15   | 6.70   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.27   | 0.39              | 0.39   | 0.50   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.66              | 0.66   | 0.86   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.69   | 0.98              | 0.98   | 1.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.92   | 1.33              | 1.34   | 1.75   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.07   | 1.52              | 1.52   | 1.98   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |



**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.36   | 2.16              | 2.50   | 3.51   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.93   | 1.32              | 1.32   | 1.72   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.83   | 1.19              | 1.18   | 1.54   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.12   | 8.74              | 8.74   | 11.36  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.11   | 8.73              | 8.72   | 11.34  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.01   | 8.59              | 8.59   | 11.17  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.41   | 0.59              | 0.59   | 0.77   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |

**Table A-22. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.21              | 0.21   | 0.27   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.60   | 0.86              | 0.86   | 1.12   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.47   | 0.66              | 0.66   | 0.86   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.16   | 1.65              | 1.65   | 2.15   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.38   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.29   | 7.74              | 7.74   | 9.20   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.32   | 6.56              | 6.55   | 7.79   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.60   | 3.21              | 3.21   | 3.81   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.93   | 1.14              | 1.14   | 1.36   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.32   | 2.85              | 2.85   | 3.39   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.22   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.22   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.55   | 0.68              | 0.68   | 0.81   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.54   | 0.67              | 0.67   | 0.80   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.34              | 0.34   | 0.40   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.06   | 1.30              | 1.30   | 1.55   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.32  | 15.29             | 15.30  | 18.23  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.84   | 1.03              | 1.03   | 1.22   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.55   | 3.14              | 3.14   | 3.73   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.59   | 3.19              | 3.19   | 3.79   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 28.14  | 34.64             | 34.63  | 41.17  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.67  | 31.60             | 31.59  | 37.56  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 28.16  | 34.67             | 34.66  | 41.20  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.10   | 2.59              | 2.59   | 3.09   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.50  | 15.39             | 15.39  | 18.29  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.32  | 15.16             | 15.16  | 18.02  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.50  | 15.39             | 15.39  | 18.29  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.81   | 4.69              | 4.69   | 5.57   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.81   | 4.69              | 4.69   | 5.57   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.65   | 3.48              | 3.51   | 4.25   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.27   | 1.56              | 1.56   | 1.85   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.35   | 0.43              | 0.42   | 0.51   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.29   | 6.52              | 6.51   | 7.74   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.30   | 6.52              | 6.52   | 7.75   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.30   | 6.52              | 6.52   | 7.75   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.09   | 3.81              | 3.81   | 4.53   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 22.78  | 28.05             | 28.04  | 33.34  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 3.22   | 3.96              | 3.96   | 4.71   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.26   | 5.24              | 5.24   | 6.23   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.01   | 2.40   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.01   | 2.40   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.01   | 2.40   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.91   | 1.11              | 1.11   | 1.32   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.53   | 1.88              | 1.88   | 2.23   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.53   | 1.88              | 1.88   | 2.23   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.53   | 1.88              | 1.88   | 2.23   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.28   | 6.49              | 6.49   | 7.72   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.92  | 13.45             | 13.44  | 15.98  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.59  | 13.04             | 13.04  | 15.50  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.50   | 3.08              | 3.08   | 3.66   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 27.57  | 33.95             | 33.94  | 40.35  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 27.57  | 33.95             | 33.94  | 40.35  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 28.11  | 34.60             | 34.59  | 41.12  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.47              | 0.47   | 0.55   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.81   | 1.00              | 1.00   | 1.19   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.78   | 12.04             | 12.03  | 14.31  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.88   | 12.17             | 12.16  | 14.46  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.45   | 11.64             | 11.63  | 13.83  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 6.57   | 8.09              | 8.09   | 9.62   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.87   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.09   | 1.34              | 1.34   | 1.60   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.94   | 4.85              | 4.84   | 5.76   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 12.35  | 15.20             | 15.20  | 18.07  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 12.34  | 15.19             | 15.18  | 18.05  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.35  | 13.98             | 13.97  | 16.61  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 11.25  | 13.85             | 13.84  | 16.46  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.24   | 2.76              | 2.76   | 3.28   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.74   | 10.77             | 10.76  | 12.79  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.74   | 10.77             | 10.76  | 12.79  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.89   | 9.72              | 9.71   | 11.55  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.43   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.49   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.97   | 3.65              | 3.65   | 4.34   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.92   | 4.82              | 4.82   | 5.73   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 31.23  | 38.44             | 38.43  | 45.69  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 31.87  | 39.23             | 39.22  | 46.63  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.27   | 6.49              | 6.49   | 7.71   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.56   | 5.62              | 5.62   | 6.68   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 10.54  | 12.97             | 12.97  | 15.41  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.78  | 16.96             | 16.96  | 20.16  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.78  | 16.96             | 16.96  | 20.16  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.36   | 7.83              | 7.83   | 9.31   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.35   | 1.67              | 1.67   | 1.99   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.16  | 26.05             | 26.05  | 30.97  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.72  | 25.52             | 25.51  | 30.33  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 20.72  | 25.52             | 25.51  | 30.33  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.76   | 2.17              | 2.16   | 2.57   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.03   | 1.26              | 1.26   | 1.50   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |



**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 1.56   | 1.92              | 1.92   | 2.28   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.86   | 3.51              | 3.51   | 4.18   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.89   | 2.33              | 2.33   | 2.77   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.87   | 1.08              | 1.08   | 1.28   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 1.93   | 2.38              | 2.38   | 2.82   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2.29   | 2.82              | 2.82   | 3.36   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.89   | 4.79              | 4.79   | 5.69   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 7.04   | 8.67              | 8.67   | 10.30  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 7.04   | 8.66              | 8.66   | 10.30  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.60   | 1.97              | 1.97   | 2.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.99   | 6.15              | 6.14   | 7.30   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.44   | 4.24              | 4.24   | 5.04   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.48   | 0.59              | 0.59   | 0.70   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.05   | 4.99              | 4.99   | 5.93   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.80   | 4.68              | 4.68   | 5.57   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.32   | 6.55              | 6.55   | 7.79   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.69   | 5.78              | 5.78   | 6.87   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.97   | 1.20              | 1.20   | 1.43   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 24.18  | 30.66             | 30.76  | 36.92  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.17  | 30.64             | 30.74  | 36.90  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.85   | 1.05              | 1.05   | 1.24   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.56   | 1.92              | 1.92   | 2.28   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.87   | 1.08              | 1.08   | 1.28   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.07   | 1.31              | 1.31   | 1.56   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.07   | 1.31              | 1.31   | 1.56   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.51  | 12.94             | 12.94  | 15.38  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 8.11   | 9.99              | 9.98   | 11.87  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.98   | 2.43              | 2.43   | 2.89   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.79   | 0.98              | 0.98   | 1.16   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.81   | 1.00              | 1.00   | 1.19   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.81   | 1.00              | 1.00   | 1.19   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.63   | 0.77              | 0.77   | 0.92   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.75   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.75   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.94   | 3.62              | 3.62   | 4.30   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.78   | 9.58              | 9.58   | 11.38  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.60   | 0.74              | 0.74   | 0.88   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.21   | 6.41              | 6.41   | 7.62   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.16   | 3.90              | 3.89   | 4.63   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.14   | 5.09              | 5.09   | 6.05   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.14   | 5.09              | 5.09   | 6.05   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.35   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.43   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.13   | 1.39              | 1.39   | 1.66   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.28   | 1.58              | 1.58   | 1.87   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.84              | 0.84   | 0.99   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.68   | 3.30              | 3.30   | 3.92   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.56   | 8.07              | 8.07   | 9.59   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.63   | 8.16              | 8.16   | 9.70   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.76              | 0.76   | 0.90   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.66   | 0.84              | 0.84   | 1.01   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.47              | 0.47   | 0.56   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 63.93  | 80.40             | 80.58  | 96.48  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.06   | 7.92              | 8.13   | 10.34  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.06   | 7.92              | 8.13   | 10.34  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 63.99  | 80.47             | 80.65  | 96.56  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 63.98  | 80.46             | 80.64  | 96.55  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 63.97  | 80.45             | 80.63  | 96.54  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 63.98  | 80.46             | 80.64  | 96.55  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 63.93  | 80.40             | 80.58  | 96.48  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.25   | 6.46              | 6.46   | 7.68   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.06   | 6.23              | 6.23   | 7.41   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.38   | 1.75              | 1.76   | 2.11   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.22              | 1.22   | 1.45   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.99   | 1.22              | 1.22   | 1.45   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.52   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 15.06  | 18.55             | 18.54  | 22.04  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.85   | 2.28              | 2.28   | 2.71   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.59              | 0.59   | 0.71   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.75   | 2.15              | 2.15   | 2.56   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.71   | 4.61              | 4.61   | 5.49   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.29   | 5.31              | 5.31   | 6.33   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.06   | 6.26              | 6.26   | 7.46   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.90   | 8.49              | 8.49   | 10.09  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.96   | 6.11              | 6.11   | 7.26   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.89  | 15.99             | 16.00  | 19.06  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.55   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.14   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.59   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.70   | 0.87              | 0.87   | 1.03   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.77   | 0.95              | 0.95   | 1.13   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.71   | 9.49              | 9.49   | 11.28  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.60   | 0.73              | 0.73   | 0.87   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.73              | 0.73   | 0.87   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.58   | 4.41              | 4.41   | 5.24   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.33   | 2.87              | 2.86   | 3.41   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 65.86  | 81.08             | 81.06  | 96.37  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 36.62  | 45.09             | 45.07  | 53.58  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 66.12  | 81.40             | 81.37  | 96.74  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 65.94  | 81.18             | 81.15  | 96.48  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 65.86  | 81.08             | 81.06  | 96.37  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.34   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.71   | 8.26              | 8.26   | 9.82   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.59   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.46   | 0.56              | 0.56   | 0.67   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.86   | 4.75              | 4.75   | 5.64   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.62  | 21.69             | 21.69  | 25.78  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.62  | 21.69             | 21.69  | 25.78  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 28.52  | 35.11             | 35.10  | 41.73  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 26.62  | 32.77             | 32.76  | 38.95  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 14.41  | 17.74             | 17.74  | 21.08  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.13  | 18.62             | 18.62  | 22.13  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.12  | 18.61             | 18.60  | 22.12  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.70   | 2.09              | 2.09   | 2.48   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.11   | 9.98              | 9.98   | 11.86  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.11   | 9.98              | 9.98   | 11.86  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.37   | 9.08              | 9.07   | 10.79  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.37   | 9.08              | 9.07   | 10.79  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.81   | 5.92              | 5.92   | 7.04   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.03   | 3.73              | 3.72   | 4.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.04   | 4.98              | 4.98   | 5.92   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.39   | 0.47              | 0.47   | 0.56   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.95   | 4.86              | 4.86   | 5.78   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.43   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.64   | 2.02              | 2.02   | 2.40   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 5.70   | 7.02              | 7.02   | 8.34   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.64   | 11.87             | 11.86  | 14.10  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.64   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.64   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.80   | 2.22              | 2.22   | 2.64   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.34   | 1.64              | 1.64   | 1.95   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 5.80   | 7.14              | 7.14   | 8.48   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.12   | 2.62              | 2.62   | 3.11   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 63.67  | 80.08             | 80.26  | 96.10  |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.28   | 6.51              | 6.50   | 7.73   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.85   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.61   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.44   | 6.70              | 6.70   | 7.96   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.10   | 6.28              | 6.28   | 7.46   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.78   | 12.05             | 12.04  | 14.32  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.78   | 12.05             | 12.05  | 14.32  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.64   | 11.87             | 11.87  | 14.11  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.04   | 1.28              | 1.28   | 1.52   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.62   | 0.76              | 0.76   | 0.91   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.53   | 8.04              | 8.04   | 9.56   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.86   | 4.75              | 4.75   | 5.65   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.86   | 4.75              | 4.75   | 5.65   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 2.37   | 2.92              | 2.92   | 3.47   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 13.80  | 17.00             | 16.99  | 20.20  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.83  | 17.03             | 17.02  | 20.24  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.82  | 17.01             | 17.01  | 20.22  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.16  | 33.63             | 33.64  | 40.07  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.03  | 33.46             | 33.47  | 39.87  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.16  | 33.63             | 33.64  | 40.07  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 24.84  | 30.76             | 30.78  | 36.66  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 18.15  | 22.35             | 22.35  | 26.57  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 18.15  | 22.35             | 22.35  | 26.57  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 18.15  | 22.35             | 22.35  | 26.57  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.15  | 22.35             | 22.34  | 26.56  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.15  | 22.35             | 22.34  | 26.56  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.78   | 4.65              | 4.65   | 5.53   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.05   | 1.29              | 1.29   | 1.53   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 11.33  | 13.95             | 13.95  | 16.58  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.04   | 2.52              | 2.52   | 2.99   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.18   | 1.46              | 1.46   | 1.73   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.37   | 5.38              | 5.38   | 6.39   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.69   | 0.84              | 0.84   | 1.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.19              | 0.19   | 0.25   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.58   | 4.40              | 4.40   | 5.23   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 11.87  | 14.62             | 14.62  | 17.38  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.78  | 14.51             | 14.50  | 17.24  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 11.78  | 14.51             | 14.50  | 17.24  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.88   | 1.09              | 1.08   | 1.29   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.40   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.49   | 1.83              | 1.83   | 2.18   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.24   | 2.76              | 2.75   | 3.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.01   | 3.77              | 3.77   | 4.50   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.49   | 4.29              | 4.29   | 5.10   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 2.02              | 2.02   | 2.40   |



**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.11   | 1.37              | 1.37   | 1.62   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.24   | 6.92              | 7.12   | 9.15   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.03   | 3.73              | 3.73   | 4.43   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.34   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.71   | 3.34              | 3.34   | 3.97   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.99  | 24.61             | 24.60  | 29.24  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 19.95  | 24.56             | 24.55  | 29.19  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.64  | 24.18             | 24.17  | 28.74  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.32   | 1.63              | 1.63   | 1.94   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.49              | 0.49   | 0.58   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.52   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.41   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.41   |

**Table A-23. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.95   | 1.17              | 1.17   | 1.39   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.97   | 2.43              | 2.43   | 2.89   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.78   | 4.66              | 4.65   | 5.53   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.15   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.67   | 0.83              | 0.83   | 0.98   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.89   | 2.28              | 2.28   | 2.67   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.11   | 10.98             | 10.97  | 12.85  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.72   | 9.29              | 9.29   | 10.88  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.77   | 4.54              | 4.54   | 5.32   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.34   | 1.62              | 1.62   | 1.90   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.54   | 0.65              | 0.65   | 0.76   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.36   | 4.04              | 4.04   | 4.73   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.18   | 5.03              | 5.03   | 5.89   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.18   | 5.03              | 5.03   | 5.89   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.86   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.56   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.53   | 1.85              | 1.85   | 2.16   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.85  | 21.67             | 21.66  | 25.43  |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.21   | 1.46              | 1.46   | 1.71   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.47              | 0.47   | 0.55   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.70   | 4.45              | 4.45   | 5.21   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.76   | 4.52              | 4.52   | 5.30   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 40.77  | 49.09             | 49.08  | 57.47  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 37.20  | 44.79             | 44.78  | 52.44  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 40.80  | 49.13             | 49.12  | 57.52  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.06   | 3.69              | 3.69   | 4.32   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 18.12  | 21.82             | 21.81  | 25.54  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 17.86  | 21.50             | 21.50  | 25.17  |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.12  | 21.82             | 21.81  | 25.54  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.52   | 6.64              | 6.64   | 7.78   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.52   | 6.64              | 6.64   | 7.78   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.83   | 4.94              | 4.94   | 5.90   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.39   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.21              | 2.21   | 2.58   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.67   | 9.23              | 9.23   | 10.81  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.67   | 9.24              | 9.24   | 10.82  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.67   | 9.24              | 9.24   | 10.82  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.89   | 2.28              | 2.28   | 2.67   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 4.54   | 5.46              | 5.46   | 6.39   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 33.04  | 39.79             | 39.78  | 46.58  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 4.67   | 5.62              | 5.62   | 6.58   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.17   | 7.43              | 7.43   | 8.70   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.31   | 1.58              | 1.58   | 1.85   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.12   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.12   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.12   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.65   | 9.21              | 9.20   | 10.78  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 15.87  | 19.11             | 19.10  | 22.37  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.41  | 18.55             | 18.55  | 21.72  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.62   | 4.36              | 4.36   | 5.11   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 39.98  | 48.15             | 48.13  | 56.36  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 39.98  | 48.15             | 48.13  | 56.36  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 40.76  | 49.08             | 49.07  | 57.45  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.19   | 1.43              | 1.43   | 1.67   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.19   | 1.43              | 1.43   | 1.67   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.18   | 1.42              | 1.42   | 1.66   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.17  | 17.07             | 17.06  | 19.98  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.32  | 17.24             | 17.24  | 20.19  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 13.69  | 16.49             | 16.49  | 19.30  |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 9.55   | 11.49             | 11.49  | 13.46  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.85   | 2.23              | 2.22   | 2.61   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.58   | 1.91              | 1.91   | 2.23   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.71   | 6.88              | 6.88   | 8.06   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 17.90  | 21.56             | 21.55  | 25.24  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.89  | 21.54             | 21.53  | 25.21  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.45  | 19.81             | 19.80  | 23.19  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.31  | 19.64             | 19.63  | 22.99  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.26   | 3.93              | 3.93   | 4.60   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.67  | 15.26             | 15.25  | 17.86  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 12.67  | 15.26             | 15.25  | 17.86  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.43  | 13.77             | 13.77  | 16.12  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.43   | 0.51              | 0.51   | 0.60   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.15   | 5.00              | 5.00   | 5.86   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.69   | 6.85              | 6.84   | 8.02   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 45.25  | 54.48             | 54.47  | 63.78  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 46.17  | 55.60             | 55.59  | 65.09  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.64   | 9.19              | 9.19   | 10.76  |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.61   | 7.96              | 7.96   | 9.32   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 15.28  | 18.39             | 18.39  | 21.53  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.97  | 24.05             | 24.04  | 28.16  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.97  | 24.05             | 24.04  | 28.16  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.86   | 9.47              | 9.47   | 11.09  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.43   | 2.94              | 2.94   | 3.44   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.66  | 36.93             | 36.92  | 43.23  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 30.03  | 36.17             | 36.16  | 42.34  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 30.03  | 36.17             | 36.16  | 42.34  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.79   | 0.96              | 0.96   | 1.12   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.48   | 2.98              | 2.98   | 3.49   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.49   | 1.79              | 1.79   | 2.10   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.02   |



**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.12   | 2.49   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 2.30   | 2.77              | 2.77   | 3.25   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 4.14   | 4.98              | 4.98   | 5.83   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.70   | 0.85              | 0.85   | 0.99   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.74   | 3.30              | 3.30   | 3.87   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.27   | 1.53              | 1.52   | 1.79   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 2.80   | 3.37              | 3.37   | 3.94   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.29   | 3.96              | 3.96   | 4.63   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.64   | 6.79              | 6.79   | 7.95   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 10.18  | 12.26             | 12.26  | 14.35  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 10.18  | 12.26             | 12.26  | 14.35  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.32   | 2.79              | 2.79   | 3.27   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.39   | 0.46              | 0.46   | 0.54   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.24   | 8.71              | 8.71   | 10.20  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.99   | 6.01              | 6.00   | 7.03   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.87   | 7.07              | 7.07   | 8.28   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.51   | 6.64              | 6.63   | 7.77   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.71   | 9.29              | 9.28   | 10.87  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.81   | 8.20              | 8.20   | 9.61   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.41   | 1.70              | 1.70   | 1.99   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 34.99  | 43.46             | 43.47  | 51.37  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.98  | 43.44             | 43.45  | 51.35  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.44   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.23   | 1.48              | 1.48   | 1.74   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.25   | 2.71              | 2.71   | 3.18   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.28   | 1.54              | 1.54   | 1.80   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.55   | 1.86              | 1.86   | 2.18   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.55   | 1.86              | 1.86   | 2.18   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.54   | 1.86              | 1.86   | 2.18   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.18   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.79   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 15.23  | 18.34             | 18.34  | 21.47  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 11.76  | 14.15             | 14.15  | 16.57  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.78   | 3.34              | 3.34   | 3.91   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.63   | 0.75              | 0.75   | 0.88   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.46   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.18   | 1.42              | 1.42   | 1.67   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.18   | 1.42              | 1.42   | 1.66   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.18   | 1.42              | 1.42   | 1.66   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.91   | 1.09              | 1.09   | 1.28   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.47              | 0.47   | 0.55   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.69   | 0.83              | 0.83   | 0.97   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.74   | 0.89              | 0.89   | 1.04   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.74   | 0.89              | 0.89   | 1.04   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.26   | 5.13              | 5.12   | 6.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.27  | 13.58             | 13.57  | 15.89  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.87   | 1.04              | 1.04   | 1.22   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.58   | 0.70              | 0.70   | 0.81   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.55   | 9.09              | 9.09   | 10.64  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.59   | 5.53              | 5.52   | 6.47   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.99   | 7.22              | 7.22   | 8.45   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.99   | 7.22              | 7.22   | 8.45   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.33   | 1.61              | 1.61   | 1.88   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.64   | 1.97              | 1.97   | 2.31   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.12   | 2.48   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.87   | 1.05              | 1.04   | 1.22   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.14   | 3.78              | 3.78   | 4.43   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.14   | 3.78              | 3.78   | 4.43   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.14   | 3.78              | 3.78   | 4.43   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.14   | 3.78              | 3.78   | 4.43   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.89   | 4.68              | 4.68   | 5.48   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 9.52   | 11.46             | 11.46  | 13.42  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.61   | 11.58             | 11.57  | 13.55  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.91   | 1.10              | 1.10   | 1.28   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.19              | 1.19   | 1.41   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.67              | 0.67   | 0.79   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.66   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 92.78  | 114.25            | 114.25 | 134.69 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.11   | 11.09             | 11.12  | 13.92  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.11   | 11.09             | 11.12  | 13.92  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 92.87  | 114.36            | 114.36 | 134.81 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 92.86  | 114.35            | 114.35 | 134.80 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 92.84  | 114.32            | 114.32 | 134.77 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 92.85  | 114.34            | 114.34 | 134.79 |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 92.78  | 114.25            | 114.25 | 134.69 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.60   | 9.16              | 9.15   | 10.72  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.34   | 8.84              | 8.83   | 10.35  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.64   | 0.78              | 0.78   | 0.91   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.92   | 2.40              | 2.40   | 2.84   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.03   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.03   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.70   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 21.82  | 26.27             | 26.27  | 30.76  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.64   | 3.18              | 3.18   | 3.72   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.54   | 3.05              | 3.05   | 3.57   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.63   | 0.76              | 0.76   | 0.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.38   | 6.53              | 6.53   | 7.66   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.21   | 7.53              | 7.53   | 8.83   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.34   | 8.88              | 8.88   | 10.42  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.00  | 12.04             | 12.04  | 14.10  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.19   | 8.66              | 8.66   | 10.14  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.70  | 22.68             | 22.68  | 26.62  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.05   | 1.27              | 1.27   | 1.49   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.62   | 0.75              | 0.74   | 0.87   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.23   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.12   | 1.35              | 1.35   | 1.58   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.48   | 0.58              | 0.58   | 0.68   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.17  | 13.45             | 13.45  | 15.74  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.15   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 0.98              | 0.98   | 1.15   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.19   | 6.25              | 6.25   | 7.31   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.37   | 4.06              | 4.06   | 4.75   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 95.47  | 114.96            | 114.93 | 134.58 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 53.16  | 64.01             | 63.99  | 74.93  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 95.85  | 115.41            | 115.39 | 135.12 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 95.64  | 115.16            | 115.14 | 134.82 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 95.47  | 114.96            | 114.93 | 134.58 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.74   | 11.73             | 11.72  | 13.73  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.85   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.19   | 1.43              | 1.43   | 1.67   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.83   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.59   | 6.73              | 6.73   | 7.88   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 25.53  | 30.74             | 30.74  | 35.99  |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 25.53  | 30.74             | 30.74  | 35.99  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 41.35  | 49.79             | 49.78  | 58.30  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 38.62  | 46.51             | 46.50  | 54.45  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 20.84  | 25.10             | 25.09  | 29.38  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.90  | 26.38             | 26.37  | 30.88  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.89  | 26.36             | 26.35  | 30.86  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.51   | 3.02              | 3.02   | 3.53   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.00   | 1.20              | 1.20   | 1.41   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.74  | 14.14             | 14.14  | 16.56  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 11.74  | 14.14             | 14.14  | 16.56  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.69  | 12.87             | 12.87  | 15.07  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.69  | 12.87             | 12.87  | 15.07  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.00   | 8.43              | 8.42   | 9.86   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 4.38   | 5.27              | 5.27   | 6.17   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 5.86   | 7.06              | 7.06   | 8.26   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.58   | 0.69              | 0.69   | 0.81   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 5.73   | 6.89              | 6.89   | 8.07   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.38   | 2.86              | 2.86   | 3.35   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 8.26   | 9.95              | 9.94   | 11.65  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 13.98  | 16.83             | 16.83  | 19.70  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.90   | 2.28              | 2.28   | 2.67   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 8.40   | 10.12             | 10.11  | 11.84  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 2.56   | 3.08              | 3.08   | 3.61   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 2.56   | 3.08              | 3.08   | 3.61   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.99   | 3.60              | 3.60   | 4.21   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 92.41  | 113.81            | 113.81 | 134.18 |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.66   | 9.22              | 9.22   | 10.80  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.86   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.25   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.65   | 9.21              | 9.21   | 10.78  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.39   | 8.90              | 8.89   | 10.41  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 14.20  | 17.11             | 17.11  | 20.04  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 14.21  | 17.11             | 17.11  | 20.04  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.03  | 16.90             | 16.90  | 19.79  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.54   | 1.85              | 1.85   | 2.17   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.85   | 1.02              | 1.02   | 1.20   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.48   | 11.42             | 11.42  | 13.37  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.59   | 6.73              | 6.73   | 7.88   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 5.59   | 6.73              | 6.73   | 7.88   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 3.17   | 3.81              | 3.81   | 4.46   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 20.01  | 24.10             | 24.09  | 28.21  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 20.04  | 24.13             | 24.13  | 28.25  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 20.03  | 24.12             | 24.12  | 28.24  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.41  | 47.73             | 47.72  | 55.98  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.20  | 47.48             | 47.48  | 55.69  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 39.41  | 47.73             | 47.72  | 55.98  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 36.01  | 43.64             | 43.63  | 51.19  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 26.41  | 31.81             | 31.80  | 37.25  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 26.41  | 31.81             | 31.80  | 37.25  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 26.41  | 31.81             | 31.80  | 37.25  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 26.41  | 31.81             | 31.80  | 37.24  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.41  | 31.81             | 31.80  | 37.24  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.47   | 6.59              | 6.59   | 7.72   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.52   | 1.83              | 1.83   | 2.15   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 16.40  | 19.75             | 19.75  | 23.13  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.61   | 3.14              | 3.14   | 3.67   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.75   | 0.91              | 0.91   | 1.06   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.75   | 0.91              | 0.91   | 1.06   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.36   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.96   | 3.57              | 3.57   | 4.18   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.69   | 2.03              | 2.03   | 2.38   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.74   | 2.10              | 2.10   | 2.45   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 6.33   | 7.62              | 7.62   | 8.93   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.46   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.16   | 0.26              | 0.26   | 0.34   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 5.07   | 6.11              | 6.11   | 7.15   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 17.21  | 20.72             | 20.72  | 24.26  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 17.07  | 20.56             | 20.55  | 24.07  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 17.07  | 20.56             | 20.55  | 24.07  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.28   | 1.54              | 1.54   | 1.80   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.09   | 2.52              | 2.52   | 2.95   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.24   | 3.90              | 3.90   | 4.57   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.58   | 0.70              | 0.70   | 0.82   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.43   | 0.52              | 0.52   | 0.60   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.37   | 5.34              | 5.34   | 6.28   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.53   | 0.64              | 0.64   | 0.75   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.06   | 6.10              | 6.10   | 7.14   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.24              | 0.23   | 0.28   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.38   | 2.86              | 2.86   | 3.35   |



**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.61   | 1.93              | 1.93   | 2.26   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6.05   | 9.82              | 9.84   | 12.43  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.39   | 5.28              | 5.28   | 6.19   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.46   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.93   | 4.73              | 4.73   | 5.54   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 28.96  | 34.88             | 34.87  | 40.83  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 28.91  | 34.81             | 34.80  | 40.75  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 28.46  | 34.27             | 34.26  | 40.12  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.88   | 2.26              | 2.26   | 2.64   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.65   | 0.79              | 0.79   | 0.93   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.53   | 0.64              | 0.64   | 0.74   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.40   | 1.68              | 1.68   | 1.97   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.40   | 1.68              | 1.68   | 1.97   |

**Table A-24. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.20   | 2.65              | 2.65   | 3.10   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.44   | 1.74              | 1.74   | 2.04   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.69   | 0.83              | 0.83   | 0.97   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 2.86   | 3.44              | 3.44   | 4.03   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 2.20   | 2.65              | 2.65   | 3.10   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 5.48   | 6.60              | 6.60   | 7.73   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 1.14   | 1.37              | 1.37   | 1.61   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.97   | 1.16              | 1.16   | 1.36   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

Table A-25. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2018

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.17              | 0.16   | 0.21   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.69   | 1.03              | 1.12   | 1.51   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.14   | 1.63              | 1.63   | 2.11   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.32   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.56   | 0.79              | 0.79   | 1.03   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.55   | 0.78              | 0.78   | 1.01   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.56   | 0.79              | 0.79   | 1.03   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.25   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.01   | 1.44              | 1.44   | 1.87   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.90   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.22   | 1.75              | 1.75   | 2.27   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.22   | 1.75              | 1.75   | 2.27   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.63              | 0.63   | 0.81   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.42   | 0.60              | 0.60   | 0.78   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.29   | 0.42              | 0.42   | 0.54   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.78              | 0.78   | 1.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.55   | 0.78              | 0.78   | 1.01   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.39   | 1.98              | 1.98   | 2.57   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.42   | 2.02              | 2.02   | 2.62   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.13   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.13   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.92   | 1.31              | 1.31   | 1.70   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.92   | 1.31              | 1.31   | 1.70   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |



**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.23   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

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| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.05   | 1.50              | 1.51   | 1.96   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.05   | 1.50              | 1.51   | 1.96   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.86   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.35   | 0.49              | 0.49   | 0.64   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.29   | 0.42              | 0.42   | 0.54   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.78   | 3.98              | 3.98   | 5.17   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.79   | 3.98              | 3.98   | 5.18   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2.79   | 3.98              | 3.98   | 5.17   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.79   | 3.98              | 3.98   | 5.17   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.79   | 3.98              | 3.98   | 5.17   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.78   | 3.98              | 3.98   | 5.17   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.67   | 0.95              | 0.95   | 1.24   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.44              | 0.44   | 0.57   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.41   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.71   | 1.07              | 1.15   | 1.56   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.92   | 4.17              | 4.17   | 5.42   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.94   | 4.19              | 4.19   | 5.44   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.93   | 4.17              | 4.17   | 5.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.92   | 4.17              | 4.17   | 5.42   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.78   | 1.12              | 1.12   | 1.45   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.78   | 1.12              | 1.12   | 1.45   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.27   | 1.80              | 1.80   | 2.34   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.18   | 1.68              | 1.68   | 2.19   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.64   | 0.91              | 0.91   | 1.19   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.67   | 0.96              | 0.96   | 1.25   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.67   | 0.96              | 0.96   | 1.24   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.11              | 0.10   | 0.14   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.13   | 0.19              | 0.19   | 0.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.25              | 0.25   | 0.32   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.61              | 0.61   | 0.79   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2.77   | 3.96              | 3.96   | 5.15   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.61              | 0.61   | 0.79   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.14   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.88              | 0.88   | 1.14   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.14   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.22   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.19   | 1.70              | 1.70   | 2.21   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.22   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.10   | 1.56              | 1.56   | 2.03   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.80   | 1.15              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.80   | 1.15              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.80   | 1.15              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.28              | 0.28   | 0.36   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.75              | 0.75   | 0.98   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |



**Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.89   | 1.27              | 1.27   | 1.64   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.89   | 1.26              | 1.26   | 1.64   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.87   | 1.24              | 1.24   | 1.62   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

Table A-26. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2025

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.91   | 1.12              | 1.12   | 1.33   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.77   | 0.95              | 0.95   | 1.12   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.55   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.20   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.49   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.16   | 3.08              | 3.14   | 3.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.45              | 0.45   | 0.54   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.06   | 5.00              | 4.99   | 5.93   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.70   | 4.56              | 4.56   | 5.41   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.06   | 5.00              | 5.00   | 5.94   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.64   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.78   | 2.19              | 2.19   | 2.60   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.80   | 2.22              | 2.22   | 2.64   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.80   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.80   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.27   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.45   | 0.55              | 0.55   | 0.65   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.29   | 4.05              | 4.04   | 4.80   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.46   | 0.57              | 0.57   | 0.68   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.61   | 0.76              | 0.76   | 0.90   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.11   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.58   | 1.94              | 1.94   | 2.30   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.53   | 1.88              | 1.88   | 2.23   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.98   | 4.90              | 4.89   | 5.81   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.98   | 4.90              | 4.89   | 5.81   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.06   | 4.99              | 4.99   | 5.93   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.41   | 1.74              | 1.74   | 2.06   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.43   | 1.75              | 1.75   | 2.08   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.36   | 1.68              | 1.68   | 1.99   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.95   | 1.17              | 1.17   | 1.39   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.78   | 2.19              | 2.19   | 2.60   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.78   | 2.19              | 2.19   | 2.60   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.64   | 2.02              | 2.02   | 2.39   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.00              | 2.00   | 2.37   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.84   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.84   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.14   | 1.40              | 1.40   | 1.66   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.51   | 5.54              | 5.54   | 6.58   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.60   | 5.66              | 5.66   | 6.72   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.66   | 0.81              | 0.81   | 0.96   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.90   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.90   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.34   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 3.05   | 3.76              | 3.76   | 4.46   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.37   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.37   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |



**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.28   | 0.34              | 0.34   | 0.41   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.48   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.56   | 0.69              | 0.69   | 0.82   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.02   | 1.25              | 1.25   | 1.48   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.02   | 1.25              | 1.25   | 1.48   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.72   | 0.89              | 0.89   | 1.05   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.61              | 0.61   | 0.73   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.58   | 0.72              | 0.72   | 0.85   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.80   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.77   | 0.95              | 0.94   | 1.12   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.68   | 0.83              | 0.83   | 0.99   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 3.42   | 4.23              | 4.23   | 5.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.42   | 4.23              | 4.23   | 5.03   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.42   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.12   | 1.38              | 1.38   | 1.64   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.75   | 0.92              | 0.92   | 1.10   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.46   | 0.56              | 0.56   | 0.67   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.60   | 0.73              | 0.73   | 0.87   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.60   | 0.73              | 0.73   | 0.87   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.95   | 1.16              | 1.16   | 1.38   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.07   | 11.18             | 11.18  | 13.28  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.73              | 0.73   | 0.87   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.73              | 0.73   | 0.87   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 9.08   | 11.19             | 11.19  | 13.30  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 9.07   | 11.19             | 11.19  | 13.29  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 9.07   | 11.18             | 11.18  | 13.29  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 9.07   | 11.19             | 11.19  | 13.29  |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.07   | 11.18             | 11.18  | 13.28  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.93              | 0.93   | 1.11   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.73   | 0.90              | 0.90   | 1.07   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.17   | 2.67              | 2.67   | 3.18   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.62   | 0.76              | 0.76   | 0.90   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.73   | 0.89              | 0.89   | 1.06   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.00   | 1.22              | 1.22   | 1.45   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.25   | 3.19              | 3.24   | 4.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.11   | 1.37              | 1.37   | 1.62   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.50   | 11.69             | 11.69  | 13.89  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 5.28   | 6.50              | 6.50   | 7.72   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 9.54   | 11.74             | 11.74  | 13.94  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.52   | 11.71             | 11.70  | 13.90  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.50   | 11.69             | 11.69  | 13.89  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.41   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.71   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.71   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.12   | 5.06              | 5.06   | 6.01   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.84   | 4.73              | 4.72   | 5.61   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.08   | 2.56              | 2.56   | 3.04   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.18   | 2.69              | 2.69   | 3.19   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.18   | 2.68              | 2.68   | 3.19   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.30              | 0.30   | 0.36   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.69   | 0.85              | 0.85   | 1.01   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.44   | 0.54              | 0.54   | 0.64   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.58   | 0.72              | 0.72   | 0.85   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.39   | 1.71              | 1.71   | 2.03   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.84   | 1.03              | 1.03   | 1.22   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 9.03   | 11.13             | 11.13  | 13.23  |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.76   | 0.94              | 0.94   | 1.11   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.27   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.79   | 0.97              | 0.97   | 1.15   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 0.91              | 0.91   | 1.07   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.41   | 1.74              | 1.74   | 2.06   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.41   | 1.74              | 1.74   | 2.06   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.39   | 1.71              | 1.71   | 2.03   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.94   | 1.16              | 1.16   | 1.38   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.69              | 0.68   | 0.81   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.56   | 0.69              | 0.68   | 0.81   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.91   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.00   | 2.46              | 2.46   | 2.92   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.91   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.90   | 4.80              | 4.80   | 5.70   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.88   | 4.78              | 4.77   | 5.67   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.90   | 4.80              | 4.80   | 5.70   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.56   | 4.39              | 4.38   | 5.21   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.55   | 0.67              | 0.67   | 0.80   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1.64   | 2.01              | 2.01   | 2.39   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.63   | 0.78              | 0.78   | 0.92   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.75   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.71   | 2.11              | 2.11   | 2.50   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.70   | 2.09              | 2.09   | 2.48   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.70   | 2.09              | 2.09   | 2.48   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.64   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.74   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |



**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.45   | 0.58              | 0.58   | 0.70   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.21   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.88   | 3.54              | 3.54   | 4.21   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.83   | 3.49              | 3.49   | 4.14   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.24              | 0.23   | 0.28   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-27. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.28   | 0.35              | 0.35   | 0.42   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.55   | 0.67              | 0.67   | 0.80   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.32   | 1.58              | 1.58   | 1.86   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.12   | 1.34              | 1.34   | 1.57   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.49   | 0.58              | 0.58   | 0.68   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.60   | 0.73              | 0.73   | 0.85   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.60   | 0.73              | 0.73   | 0.85   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.11   | 4.38              | 4.39   | 5.36   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.64              | 0.64   | 0.75   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.54   | 0.65              | 0.65   | 0.76   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.90   | 7.09              | 7.09   | 8.30   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.38   | 6.47              | 6.47   | 7.57   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.90   | 7.09              | 7.09   | 8.31   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.44   | 0.53              | 0.53   | 0.62   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.62   | 3.15              | 3.15   | 3.69   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.58   | 3.10              | 3.10   | 3.64   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.62   | 3.15              | 3.15   | 3.69   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.13   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.13   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.53   | 0.65              | 0.65   | 0.76   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.27   | 0.32              | 0.32   | 0.37   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.66   | 0.79              | 0.79   | 0.92   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.78   | 5.74              | 5.74   | 6.73   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.68   | 0.81              | 0.81   | 0.95   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.89   | 1.07              | 1.07   | 1.26   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.30   | 2.76              | 2.76   | 3.23   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.23   | 2.68              | 2.68   | 3.14   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.78   | 6.95              | 6.95   | 8.14   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.78   | 6.95              | 6.95   | 8.14   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.90   | 7.09              | 7.09   | 8.30   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.05   | 2.46              | 2.46   | 2.89   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.07   | 2.49              | 2.49   | 2.92   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.98   | 2.38              | 2.38   | 2.79   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.38   | 1.66              | 1.66   | 1.94   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.27   | 0.32              | 0.32   | 0.38   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.32   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.83   | 0.99              | 0.99   | 1.16   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.59   | 3.11              | 3.11   | 3.64   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.59   | 3.11              | 3.11   | 3.64   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.38   | 2.86              | 2.86   | 3.35   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.36   | 2.84              | 2.83   | 3.32   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.66   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.65   | 1.99              | 1.99   | 2.33   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.85   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6.54   | 7.87              | 7.87   | 9.21   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.68   | 8.03              | 8.03   | 9.40   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.10   | 1.33              | 1.33   | 1.55   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.96   | 1.15              | 1.15   | 1.35   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.11   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.89   | 3.47              | 3.47   | 4.07   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.89   | 3.47              | 3.47   | 4.07   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.14   | 1.37              | 1.37   | 1.60   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.35   | 0.42              | 0.42   | 0.49   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.43   | 5.33              | 5.33   | 6.24   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.34   | 5.22              | 5.22   | 6.11   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.34   | 5.22              | 5.22   | 6.11   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.43              | 0.43   | 0.50   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |



**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.36   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.47   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.56   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.40   | 0.49              | 0.49   | 0.57   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.48   | 0.57              | 0.57   | 0.67   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.82   | 0.98              | 0.98   | 1.15   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.47   | 1.77              | 1.77   | 2.07   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.47   | 1.77              | 1.77   | 2.07   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.34   | 0.40              | 0.40   | 0.47   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.05   | 1.26              | 1.26   | 1.47   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.85   | 1.02              | 1.02   | 1.20   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.12   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.12   | 1.34              | 1.34   | 1.57   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.99   | 1.18              | 1.18   | 1.39   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.29   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.96   | 6.00              | 6.00   | 7.04   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.96   | 6.00              | 6.00   | 7.03   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.20   | 2.65              | 2.65   | 3.10   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.70   | 2.04              | 2.04   | 2.39   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.57   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.18   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.62   | 0.74              | 0.74   | 0.87   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.63   | 1.96              | 1.96   | 2.30   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.09   | 1.31              | 1.31   | 1.54   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.66   | 0.80              | 0.80   | 0.93   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.87   | 1.04              | 1.04   | 1.22   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.87   | 1.04              | 1.04   | 1.22   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.28              | 0.28   | 0.33   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.45   | 0.55              | 0.55   | 0.64   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.55              | 0.55   | 0.64   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.45   | 0.55              | 0.55   | 0.64   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.45   | 0.55              | 0.55   | 0.64   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.38   | 1.66              | 1.65   | 1.94   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.39   | 1.67              | 1.67   | 1.96   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.19   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.20  | 15.90             | 15.90  | 18.63  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.81   | 1.01              | 1.01   | 1.19   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.81   | 1.01              | 1.01   | 1.19   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 13.22  | 15.92             | 15.92  | 18.65  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 13.21  | 15.92             | 15.91  | 18.65  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 13.21  | 15.91             | 15.91  | 18.64  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 13.21  | 15.92             | 15.91  | 18.65  |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.20  | 15.90             | 15.90  | 18.63  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.10   | 1.32              | 1.32   | 1.55   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.28              | 1.28   | 1.49   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.16   | 3.79              | 3.79   | 4.44   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.54   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.77   | 0.93              | 0.93   | 1.09   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.89   | 1.07              | 1.07   | 1.26   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.06   | 1.27              | 1.27   | 1.49   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.45   | 1.74              | 1.74   | 2.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.04   | 1.25              | 1.25   | 1.46   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.23   | 4.53              | 4.53   | 5.53   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 1.94              | 1.94   | 2.27   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.06   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.81  | 16.60             | 16.60  | 19.44  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7.69   | 9.24              | 9.24   | 10.82  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13.86  | 16.66             | 16.66  | 19.51  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.83  | 16.63             | 16.63  | 19.47  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.81  | 16.60             | 16.60  | 19.44  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.41   | 1.69              | 1.69   | 1.98   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.69   | 4.44              | 4.44   | 5.20   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.69   | 4.44              | 4.44   | 5.20   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.98   | 7.19              | 7.19   | 8.42   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.59   | 6.72              | 6.71   | 7.86   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.01   | 3.62              | 3.62   | 4.24   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.17   | 3.81              | 3.81   | 4.46   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.17   | 3.81              | 3.80   | 4.46   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.51   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.70   | 2.04              | 2.04   | 2.39   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.70   | 2.04              | 2.04   | 2.39   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.55   | 1.86              | 1.86   | 2.18   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.55   | 1.86              | 1.86   | 2.18   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.01   | 1.22              | 1.22   | 1.42   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.63   | 0.76              | 0.76   | 0.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.85   | 1.02              | 1.02   | 1.19   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 1.00              | 1.00   | 1.17   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.19   | 1.44              | 1.44   | 1.68   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.02   | 2.43              | 2.43   | 2.85   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.22   | 1.46              | 1.46   | 1.71   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.37   | 0.45              | 0.44   | 0.52   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.37   | 0.45              | 0.44   | 0.52   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 13.15  | 15.84             | 15.84  | 18.56  |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.07   | 1.28              | 1.28   | 1.50   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.05   | 2.47              | 2.47   | 2.89   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.05   | 2.47              | 2.47   | 2.89   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.03   | 2.44              | 2.44   | 2.86   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.37   | 1.65              | 1.65   | 1.93   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.46   | 0.55              | 0.55   | 0.64   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.89   | 3.48              | 3.48   | 4.07   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.90   | 3.48              | 3.48   | 4.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.90   | 3.48              | 3.48   | 4.08   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.67   | 6.82              | 6.82   | 7.99   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.64   | 6.78              | 6.78   | 7.94   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.67   | 6.82              | 6.82   | 7.99   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.18   | 6.23              | 6.23   | 7.29   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.82   | 4.59              | 4.59   | 5.38   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.82   | 4.59              | 4.59   | 5.38   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.82   | 4.59              | 4.59   | 5.38   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.82   | 4.59              | 4.59   | 5.38   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.82   | 4.59              | 4.59   | 5.38   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.22   | 0.26              | 0.26   | 0.31   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.37   | 2.85              | 2.85   | 3.34   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.52              | 0.52   | 0.60   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.92   | 1.10              | 1.10   | 1.29   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2.49   | 2.99              | 2.99   | 3.50   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.47   | 2.97              | 2.97   | 3.48   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.47   | 2.97              | 2.97   | 3.48   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.56              | 0.56   | 0.66   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.63   | 0.76              | 0.76   | 0.89   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |



**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.66   | 0.82              | 0.82   | 0.98   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.63   | 0.76              | 0.76   | 0.89   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.57   | 0.68              | 0.68   | 0.80   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.19   | 5.04              | 5.04   | 5.90   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.18   | 5.03              | 5.03   | 5.89   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.12   | 4.95              | 4.95   | 5.79   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |

**Table A-28. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.79   | 0.95              | 0.95   | 1.12   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01               | 0.01   | 0.01   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01               | 0.01   | 0.01   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01               | 0.01   | 0.01   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-29. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.62              | 0.65   | 0.87   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.46              | 0.48   | 0.63   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.16   | 0.23              | 0.24   | 0.32   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.26   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.78   | 1.14              | 1.19   | 1.58   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.11   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.28   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.28   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.67   | 2.39              | 2.45   | 3.21   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.51   | 2.16              | 2.20   | 2.89   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.67   | 2.40              | 2.45   | 3.21   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.24   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.72   | 1.04              | 1.05   | 1.38   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.71   | 1.02              | 1.03   | 1.35   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.72   | 1.04              | 1.05   | 1.38   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.39              | 0.42   | 0.56   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.39              | 0.42   | 0.56   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.20   | 0.31              | 0.34   | 0.46   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.36   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.34   | 1.93              | 1.97   | 2.58   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.08   | 0.11   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.37              | 0.39   | 0.51   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.64   | 0.92              | 0.93   | 1.22   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.62   | 0.89              | 0.90   | 1.18   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.23   | 0.30   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.62   | 2.32              | 2.36   | 3.09   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.36   | 3.09   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.65   | 2.36              | 2.40   | 3.15   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.58   | 0.83              | 0.84   | 1.10   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.58   | 0.84              | 0.85   | 1.12   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.56   | 0.80              | 0.81   | 1.06   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.38   | 0.54              | 0.55   | 0.72   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.19   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.34              | 0.35   | 0.46   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 1.04              | 1.06   | 1.39   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.73   | 1.04              | 1.06   | 1.39   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.67   | 0.96              | 0.98   | 1.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.66   | 0.95              | 0.97   | 1.27   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.23              | 0.24   | 0.32   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 0.75              | 0.77   | 1.02   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.75              | 0.77   | 1.02   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.47   | 0.68              | 0.69   | 0.91   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.35   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.34              | 0.35   | 0.45   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.82   | 2.60              | 2.64   | 3.46   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.86   | 2.66              | 2.70   | 3.54   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.44              | 0.45   | 0.58   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.27   | 0.38              | 0.39   | 0.51   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.72   | 1.06              | 1.13   | 1.50   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.94   | 1.38              | 1.47   | 1.95   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.94   | 1.38              | 1.47   | 1.95   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.59              | 0.60   | 0.79   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.26   | 1.82              | 1.86   | 2.44   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.24   | 1.78              | 1.82   | 2.39   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.24   | 1.78              | 1.82   | 2.39   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |



**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.26   | 0.34   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.20   | 0.26   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.11   | 0.16              | 0.16   | 0.22   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.34   | 0.45   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.41   | 0.59              | 0.59   | 0.78   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.41   | 0.59              | 0.59   | 0.78   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.31   | 0.40   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.24   | 0.34              | 0.34   | 0.45   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.45              | 0.46   | 0.60   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.27   | 0.39              | 0.39   | 0.52   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.64   | 2.43              | 2.60   | 3.47   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.64   | 2.43              | 2.60   | 3.47   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.16   | 0.22   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.13   | 0.21              | 0.23   | 0.31   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.62   | 0.89              | 0.91   | 1.19   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.23   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51   | 0.74              | 0.78   | 1.03   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.47              | 0.48   | 0.63   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.27              | 0.28   | 0.37   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.37   | 0.49   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.37   | 0.49   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.16   | 0.21   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.14   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.24              | 0.24   | 0.32   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.38   | 0.54              | 0.55   | 0.71   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.38   | 0.55              | 0.55   | 0.72   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.58   | 5.11              | 5.15   | 6.74   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.24   | 0.34              | 0.35   | 0.47   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.24   | 0.34              | 0.35   | 0.47   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.58   | 5.11              | 5.16   | 6.74   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3.58   | 5.11              | 5.16   | 6.74   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.58   | 5.11              | 5.16   | 6.74   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.58   | 5.11              | 5.16   | 6.74   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.58   | 5.11              | 5.15   | 6.74   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.45              | 0.46   | 0.60   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.87   | 1.24              | 1.26   | 1.64   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.21   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.31              | 0.32   | 0.42   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.37              | 0.38   | 0.50   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.44              | 0.46   | 0.60   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.57              | 0.58   | 0.76   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.42   | 0.55   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.82   | 1.19              | 1.24   | 1.64   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.45   | 0.64              | 0.65   | 0.86   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.40   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.87   | 5.55              | 5.65   | 7.40   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2.16   | 3.10              | 3.16   | 4.14   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.88   | 5.56              | 5.66   | 7.42   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.86   | 5.54              | 5.64   | 7.39   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.87   | 5.55              | 5.65   | 7.40   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.39   | 0.56              | 0.57   | 0.74   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.44              | 0.48   | 0.64   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.11   | 1.61              | 1.68   | 2.22   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.11   | 1.61              | 1.68   | 2.22   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.74   | 2.51              | 2.59   | 3.41   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.63   | 2.35              | 2.43   | 3.20   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.83   | 1.19              | 1.20   | 1.57   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.25              | 1.26   | 1.65   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.25              | 1.26   | 1.65   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.43   | 0.62              | 0.63   | 0.83   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.62              | 0.63   | 0.83   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.53   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.18   | 0.25              | 0.26   | 0.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.24   | 0.35              | 0.36   | 0.47   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.23   | 0.33              | 0.34   | 0.45   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.34   | 0.48              | 0.49   | 0.64   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.56   | 0.80              | 0.81   | 1.07   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.34   | 0.48              | 0.49   | 0.64   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.18              | 0.18   | 0.23   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3.56   | 5.09              | 5.13   | 6.71   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.45              | 0.46   | 0.60   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.42   | 0.55   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.55   | 0.78              | 0.79   | 1.03   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.09   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.56              | 0.57   | 0.75   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.44   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.44   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.57   | 2.25              | 2.28   | 2.98   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.56   | 2.23              | 2.27   | 2.97   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.57   | 2.25              | 2.28   | 2.98   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.44   | 2.06              | 2.09   | 2.73   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.05   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.05   | 1.51              | 1.54   | 2.01   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.70   | 1.02              | 1.05   | 1.39   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.37              | 0.38   | 0.49   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.24   | 0.35              | 0.37   | 0.49   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.75   | 1.09              | 1.14   | 1.50   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.75   | 1.08              | 1.13   | 1.49   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.75   | 1.08              | 1.13   | 1.49   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.36   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.31              | 0.32   | 0.42   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |



**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.19   | 0.27              | 0.28   | 0.37   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.17   | 0.25              | 0.25   | 0.33   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.29   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.16   | 1.65              | 1.67   | 2.19   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.15   | 1.65              | 1.67   | 2.19   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.14   | 1.62              | 1.65   | 2.15   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |

**Table A-30. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.12   | 0.17              | 0.17   | 0.23   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.22   | 0.32              | 0.32   | 0.43   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.38              | 0.38   | 0.47   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.34   | 1.81              | 1.83   | 2.24   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.04   | 1.33              | 1.34   | 1.61   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.52   | 0.67              | 0.68   | 0.82   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.44   | 0.55              | 0.55   | 0.66   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.54   | 0.68              | 0.69   | 0.82   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.54   | 0.68              | 0.69   | 0.82   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.15   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.20              | 0.21   | 0.26   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.26   | 0.31   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.51   | 3.32              | 3.35   | 4.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.24   | 0.29   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.60              | 0.61   | 0.72   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.73   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.39   | 6.83              | 6.86   | 8.23   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.88   | 6.16              | 6.19   | 7.41   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.39   | 6.84              | 6.87   | 8.23   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.52              | 0.52   | 0.63   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.35   | 2.94              | 2.95   | 3.52   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.32   | 2.90              | 2.91   | 3.47   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.35   | 2.94              | 2.95   | 3.52   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.84   | 1.16              | 1.17   | 1.44   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.84   | 1.16              | 1.17   | 1.44   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.63   | 0.93              | 0.95   | 1.18   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.32              | 0.32   | 0.38   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.20              | 0.20   | 0.26   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.09              | 0.10   | 0.13   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.02   | 1.31              | 1.31   | 1.58   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.03   | 1.31              | 1.32   | 1.58   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.03   | 1.31              | 1.32   | 1.58   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.28   | 0.38              | 0.38   | 0.47   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.60   | 0.76              | 0.77   | 0.92   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.35   | 5.50              | 5.52   | 6.61   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.60   | 0.74              | 0.74   | 0.88   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.20              | 0.22   | 0.29   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 1.07              | 1.08   | 1.30   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.99   | 1.23              | 1.24   | 1.47   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.07   | 2.61              | 2.62   | 3.14   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.01   | 2.53              | 2.54   | 3.04   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.49   | 0.63              | 0.63   | 0.76   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.24   | 6.60              | 6.63   | 7.93   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.24   | 6.60              | 6.63   | 7.93   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.34   | 6.72              | 6.75   | 8.08   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.86   | 2.35              | 2.36   | 2.83   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.88   | 2.38              | 2.39   | 2.86   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.80   | 2.27              | 2.28   | 2.73   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.23   | 1.54              | 1.54   | 1.84   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.38              | 0.39   | 0.48   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.21   | 0.26              | 0.26   | 0.32   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.76   | 0.97              | 0.97   | 1.17   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.35   | 2.97              | 2.98   | 3.57   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.35   | 2.96              | 2.97   | 3.56   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.16   | 2.73              | 2.74   | 3.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.14   | 2.70              | 2.71   | 3.25   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.49   | 0.67              | 0.68   | 0.83   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.69   | 2.16              | 2.17   | 2.61   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.69   | 2.16              | 2.17   | 2.61   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.52   | 1.94              | 1.95   | 2.34   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.57   | 0.73              | 0.73   | 0.88   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 0.96              | 0.97   | 1.16   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 5.89   | 7.39              | 7.42   | 8.87   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.02   | 7.56              | 7.58   | 9.07   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.25              | 1.25   | 1.49   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.86   | 1.08              | 1.08   | 1.30   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.28   | 3.12              | 3.17   | 3.87   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.98   | 4.06              | 4.12   | 5.03   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.98   | 4.06              | 4.12   | 5.03   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.23   | 1.57              | 1.58   | 1.90   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.41   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.08   | 5.20              | 5.22   | 6.27   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.00   | 5.09              | 5.11   | 6.14   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.00   | 5.09              | 5.11   | 6.14   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.15   | 0.18   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.45              | 0.46   | 0.55   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.24              | 0.24   | 0.29   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |



**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.24   | 0.31              | 0.31   | 0.37   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.31   | 0.41              | 0.41   | 0.50   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.11   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.56   | 0.72              | 0.72   | 0.87   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.40   | 0.55              | 0.55   | 0.67   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.75   | 0.95              | 0.96   | 1.15   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.33   | 1.66              | 1.67   | 1.99   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.33   | 1.66              | 1.67   | 1.99   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.34   | 0.47              | 0.47   | 0.58   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.23              | 1.23   | 1.48   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.67   | 0.86              | 0.86   | 1.03   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.76   | 0.96              | 0.96   | 1.15   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.72   | 0.90              | 0.90   | 1.08   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.01   | 1.28              | 1.28   | 1.53   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.88   | 1.11              | 1.11   | 1.33   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.20   | 7.19              | 7.29   | 8.93   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.20   | 7.18              | 7.29   | 8.93   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.27   | 0.44              | 0.45   | 0.57   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.42   | 0.63              | 0.65   | 0.81   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.24              | 0.25   | 0.29   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.24              | 0.25   | 0.29   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.01   | 2.54              | 2.55   | 3.06   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.55   | 1.95              | 1.96   | 2.35   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.38   | 0.48              | 0.48   | 0.57   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.16              | 0.16   | 0.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.57   | 0.73              | 0.74   | 0.89   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 2.15              | 2.18   | 2.64   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.03   | 1.34              | 1.35   | 1.63   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.78              | 0.79   | 0.94   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.81   | 1.04              | 1.05   | 1.26   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.81   | 1.04              | 1.05   | 1.26   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.09   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.21   | 0.27              | 0.27   | 0.32   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.43   | 0.53   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.27              | 0.28   | 0.34   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.41   | 0.50              | 0.51   | 0.60   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.41   | 0.50              | 0.51   | 0.60   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.41   | 0.50              | 0.51   | 0.60   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.41   | 0.50              | 0.51   | 0.60   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.68              | 0.68   | 0.83   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.23   | 1.53              | 1.54   | 1.83   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.24   | 1.55              | 1.55   | 1.85   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.09              | 0.10   | 0.13   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.26   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.66  | 14.48             | 14.50  | 17.29  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.75   | 0.97              | 0.98   | 1.18   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.75   | 0.97              | 0.98   | 1.18   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 11.67  | 14.49             | 14.52  | 17.31  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 11.67  | 14.49             | 14.51  | 17.30  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 11.67  | 14.48             | 14.51  | 17.30  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 11.67  | 14.49             | 14.51  | 17.30  |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.66  | 14.48             | 14.50  | 17.29  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.01   | 1.28              | 1.29   | 1.54   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.97   | 1.24              | 1.25   | 1.50   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.37              | 0.38   | 0.46   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.27              | 0.27   | 0.33   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.20   | 0.27              | 0.27   | 0.33   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.82   | 3.51              | 3.52   | 4.20   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.45              | 0.45   | 0.54   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.34   | 0.44              | 0.44   | 0.53   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.70   | 0.89              | 0.89   | 1.07   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.83   | 1.06              | 1.07   | 1.29   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.99   | 1.28              | 1.28   | 1.55   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.30   | 1.62              | 1.63   | 1.95   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.93   | 1.17              | 1.17   | 1.40   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.62   | 3.46              | 3.49   | 4.23   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.24   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.46   | 1.83              | 1.84   | 2.20   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.68   | 0.85              | 0.86   | 1.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.45   | 0.58              | 0.58   | 0.70   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.52  | 15.79             | 15.85  | 18.98  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 6.99   | 8.83              | 8.87   | 10.62  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.56  | 15.82             | 15.88  | 19.01  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12.52  | 15.78             | 15.84  | 18.96  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.52  | 15.79             | 15.85  | 18.98  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.27   | 1.59              | 1.59   | 1.90   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.12   | 0.14   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.91   | 1.31              | 1.33   | 1.65   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.56   | 4.68              | 4.72   | 5.71   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.56   | 4.68              | 4.72   | 5.71   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.60   | 7.22              | 7.27   | 8.75   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.24   | 6.77              | 6.82   | 8.22   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.70   | 3.36              | 3.37   | 4.02   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.83   | 3.53              | 3.54   | 4.22   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.83   | 3.52              | 3.53   | 4.22   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.41              | 0.41   | 0.49   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.55   | 1.96              | 1.97   | 2.36   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.55   | 1.96              | 1.97   | 2.36   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.40   | 1.77              | 1.78   | 2.13   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.40   | 1.77              | 1.78   | 2.13   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.91   | 1.14              | 1.14   | 1.36   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.57   | 0.72              | 0.72   | 0.86   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.78   | 1.00              | 1.00   | 1.20   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.75   | 0.95              | 0.96   | 1.15   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.09   | 1.37              | 1.37   | 1.65   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.82   | 2.28              | 2.29   | 2.74   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.26   | 0.33              | 0.33   | 0.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.10   | 1.38              | 1.38   | 1.65   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.39   | 0.49              | 0.49   | 0.58   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 11.61  | 14.42             | 14.44  | 17.22  |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.03   | 1.32              | 1.33   | 1.60   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.30              | 0.30   | 0.36   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.12   | 0.14   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.01   | 1.25              | 1.26   | 1.50   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.95   | 1.17              | 1.17   | 1.40   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.25              | 2.26   | 2.69   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.25              | 2.26   | 2.69   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.79   | 2.22              | 2.22   | 2.65   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.20   | 0.25              | 0.26   | 0.31   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.22   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.26   | 1.61              | 1.61   | 1.94   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.74   | 0.93              | 0.93   | 1.12   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.74   | 0.93              | 0.93   | 1.12   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.65   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.60   | 3.25              | 3.26   | 3.90   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.60   | 3.26              | 3.27   | 3.90   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.60   | 3.25              | 3.26   | 3.90   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.09   | 6.38              | 6.40   | 7.65   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.07   | 6.35              | 6.37   | 7.61   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.09   | 6.38              | 6.40   | 7.65   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.66   | 5.84              | 5.86   | 7.01   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.43   | 4.31              | 4.33   | 5.18   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.43   | 4.31              | 4.33   | 5.18   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.43   | 4.31              | 4.33   | 5.18   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.43   | 4.31              | 4.33   | 5.17   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.43   | 4.31              | 4.33   | 5.17   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.72   | 0.90              | 0.91   | 1.08   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.25   | 2.93              | 2.95   | 3.56   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.37   | 0.48              | 0.49   | 0.59   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.50   | 0.60   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.23   | 0.30              | 0.30   | 0.36   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.31              | 0.31   | 0.38   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 1.05              | 1.06   | 1.26   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.20   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.14   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.75   | 1.00              | 1.01   | 1.23   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2.41   | 3.16              | 3.19   | 3.86   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.39   | 3.14              | 3.17   | 3.84   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.39   | 3.14              | 3.17   | 3.84   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.44   | 0.58              | 0.58   | 0.70   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.20   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.59   | 0.76              | 0.77   | 0.92   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.69   | 0.89              | 0.89   | 1.07   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |



**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.34   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.60   | 0.79              | 0.79   | 0.96   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.56   | 0.70              | 0.70   | 0.83   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.20   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.75   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.75   | 4.69              | 4.70   | 5.61   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.74   | 4.68              | 4.69   | 5.60   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.69   | 4.61              | 4.62   | 5.52   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.25   | 0.32              | 0.32   | 0.39   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.27   | 0.32   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.27   | 0.32   |

**Table A-31. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.44   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.15   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.38   | 0.48              | 0.49   | 0.58   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.29   | 0.38              | 0.38   | 0.46   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.72   | 0.91              | 0.91   | 1.09   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.17              | 0.17   | 0.21   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.54              | 0.54   | 0.65   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.92   | 2.56              | 2.56   | 3.08   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.50   | 1.88              | 1.88   | 2.23   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.74   | 0.95              | 0.95   | 1.13   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.63   | 0.78              | 0.78   | 0.92   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.79   | 0.97              | 0.97   | 1.14   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.79   | 0.97              | 0.97   | 1.14   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.28              | 0.28   | 0.35   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.44   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.60   | 4.69              | 4.69   | 5.61   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.40   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.69   | 0.85              | 0.85   | 1.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.70   | 0.86              | 0.86   | 1.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 7.77   | 9.65              | 9.65   | 11.42  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.05   | 8.71              | 8.70   | 10.28  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.78   | 9.66              | 9.66   | 11.43  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.59   | 0.74              | 0.74   | 0.87   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.39   | 4.16              | 4.15   | 4.90   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.35   | 4.10              | 4.09   | 4.83   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.39   | 4.16              | 4.15   | 4.90   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.63              | 1.64   | 1.98   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.20   | 1.63              | 1.64   | 1.98   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.31              | 1.32   | 1.62   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.36   | 0.45              | 0.45   | 0.53   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.27              | 0.28   | 0.35   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.13              | 0.13   | 0.17   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.48   | 1.85              | 1.85   | 2.19   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.48   | 1.85              | 1.85   | 2.19   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.48   | 1.85              | 1.85   | 2.19   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.54              | 0.54   | 0.65   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.87   | 1.09              | 1.09   | 1.29   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.28   | 7.77              | 7.77   | 9.19   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.86   | 1.05              | 1.05   | 1.23   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.29              | 0.29   | 0.38   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.20   | 1.52              | 1.52   | 1.80   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.43   | 1.74              | 1.74   | 2.05   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.00   | 3.70              | 3.70   | 4.37   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.91   | 3.59              | 3.59   | 4.24   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.70   | 0.89              | 0.89   | 1.05   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 7.56   | 9.34              | 9.33   | 11.02  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.56   | 9.34              | 9.33   | 11.02  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.71   | 9.51              | 9.51   | 11.23  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.69   | 3.33              | 3.33   | 3.93   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.72   | 3.36              | 3.36   | 3.97   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.60   | 3.21              | 3.21   | 3.79   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.78   | 2.18              | 2.17   | 2.56   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.40   | 0.54              | 0.54   | 0.66   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.10   | 1.37              | 1.37   | 1.62   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.39   | 4.19              | 4.19   | 4.95   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.39   | 4.19              | 4.19   | 4.95   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.12   | 3.85              | 3.85   | 4.55   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.09   | 3.82              | 3.82   | 4.51   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.70   | 0.95              | 0.95   | 1.15   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.44   | 3.05              | 3.05   | 3.61   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.44   | 3.05              | 3.05   | 3.61   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.19   | 2.74              | 2.74   | 3.24   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 1.00              | 1.00   | 1.18   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.09   | 1.36              | 1.36   | 1.62   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 8.51   | 10.45             | 10.44  | 12.32  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.69   | 10.68             | 10.68  | 12.60  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.43   | 1.76              | 1.76   | 2.07   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.24   | 1.53              | 1.53   | 1.80   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.27   | 4.41              | 4.42   | 5.33   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.27   | 5.74              | 5.75   | 6.93   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.27   | 5.74              | 5.75   | 6.93   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.51   | 1.89              | 1.89   | 2.24   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.47   | 0.59              | 0.59   | 0.71   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.88   | 7.34              | 7.34   | 8.70   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.76   | 7.19              | 7.19   | 8.51   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.76   | 7.19              | 7.19   | 8.51   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.23              | 0.23   | 0.27   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.17              | 0.17   | 0.22   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.62              | 0.62   | 0.74   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.28   | 0.34              | 0.34   | 0.40   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |



**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.46   | 0.59              | 0.59   | 0.70   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.15   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.81   | 1.02              | 1.02   | 1.21   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.23   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.58   | 0.77              | 0.77   | 0.93   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.53   | 0.65              | 0.65   | 0.77   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.87   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.08   | 1.34              | 1.34   | 1.59   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.91   | 2.34              | 2.34   | 2.76   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.91   | 2.34              | 2.34   | 2.76   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.49   | 0.66              | 0.66   | 0.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.39   | 1.73              | 1.73   | 2.05   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.96   | 1.21              | 1.21   | 1.43   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.10   | 1.35              | 1.35   | 1.60   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.04   | 1.27              | 1.27   | 1.50   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.46   | 1.80              | 1.80   | 2.13   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.85   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.45   | 10.15             | 10.17  | 12.29  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.44   | 10.15             | 10.16  | 12.29  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.38   | 0.62              | 0.62   | 0.77   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.59   | 0.89              | 0.89   | 1.10   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.90   | 3.60              | 3.59   | 4.25   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.23   | 2.76              | 2.76   | 3.26   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.53   | 0.65              | 0.65   | 0.77   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.21   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.23              | 0.23   | 0.27   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.04              | 1.04   | 1.23   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.32   | 3.04              | 3.05   | 3.65   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.49   | 1.89              | 1.90   | 2.26   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.88   | 1.11              | 1.10   | 1.31   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.17   | 1.47              | 1.47   | 1.75   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.17   | 1.47              | 1.47   | 1.75   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.33              | 0.33   | 0.39   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.44   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.57              | 0.57   | 0.70   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.35              | 0.35   | 0.44   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.96              | 0.96   | 1.14   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.78   | 2.17              | 2.17   | 2.56   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.79   | 2.19              | 2.19   | 2.58   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.13              | 0.13   | 0.18   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.29              | 0.29   | 0.36   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.89  | 20.51             | 20.50  | 24.11  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.06   | 1.34              | 1.34   | 1.60   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.06   | 1.34              | 1.34   | 1.60   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.91  | 20.53             | 20.52  | 24.14  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 16.91  | 20.53             | 20.51  | 24.13  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.90  | 20.53             | 20.51  | 24.13  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.90  | 20.53             | 20.51  | 24.13  |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.89  | 20.51             | 20.50  | 24.11  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.45   | 1.81              | 1.81   | 2.14   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.41   | 1.75              | 1.75   | 2.08   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.51              | 0.51   | 0.61   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.38              | 0.38   | 0.46   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.38              | 0.38   | 0.46   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.07   | 4.96              | 4.96   | 5.84   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.49   | 0.62              | 0.62   | 0.73   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.02   | 1.26              | 1.26   | 1.49   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.50              | 1.50   | 1.78   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.43   | 1.81              | 1.81   | 2.15   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.87   | 2.30              | 2.29   | 2.71   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.35   | 1.65              | 1.65   | 1.95   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.76   | 4.89              | 4.89   | 5.85   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.04   | 0.05   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.27   | 0.33   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.10   | 2.59              | 2.58   | 3.05   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.98   | 1.20              | 1.20   | 1.42   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.65   | 0.82              | 0.82   | 0.97   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.08  | 22.33             | 22.32  | 26.36  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 10.10  | 12.50             | 12.50  | 14.77  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 18.13  | 22.37             | 22.36  | 26.41  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 18.09  | 22.32             | 22.31  | 26.35  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.08  | 22.33             | 22.32  | 26.36  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.83   | 2.25              | 2.25   | 2.65   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.35   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.30   | 1.85              | 1.85   | 2.26   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.12   | 6.61              | 6.61   | 7.89   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.12   | 6.61              | 6.61   | 7.89   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.07   | 10.21             | 10.21  | 12.13  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.56   | 9.58              | 9.59   | 11.39  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.89   | 4.74              | 4.74   | 5.58   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.08   | 4.98              | 4.98   | 5.86   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.08   | 4.98              | 4.97   | 5.86   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.59              | 0.58   | 0.69   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.24   | 2.77              | 2.77   | 3.28   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.24   | 2.77              | 2.77   | 3.28   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.03   | 2.50              | 2.50   | 2.95   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.03   | 2.50              | 2.50   | 2.95   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.31   | 1.61              | 1.61   | 1.90   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.82   | 1.01              | 1.01   | 1.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.13   | 1.41              | 1.41   | 1.67   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.09   | 1.35              | 1.35   | 1.59   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.63   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.57   | 1.94              | 1.93   | 2.29   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.63   | 3.23              | 3.22   | 3.80   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.36   | 0.45              | 0.45   | 0.53   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.58   | 1.94              | 1.94   | 2.29   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.55   | 0.67              | 0.67   | 0.78   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 16.82  | 20.43             | 20.41  | 24.02  |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.49   | 1.87              | 1.87   | 2.22   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.35   | 0.42              | 0.42   | 0.50   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.42   | 1.72              | 1.72   | 2.02   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.37   | 1.66              | 1.65   | 1.95   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.63   | 3.19              | 3.19   | 3.75   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.63   | 3.19              | 3.19   | 3.75   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.60   | 3.15              | 3.15   | 3.70   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.43   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.24              | 0.24   | 0.29   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.82   | 2.27              | 2.27   | 2.69   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.58   | 0.71              | 0.71   | 0.83   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.75   | 4.60              | 4.60   | 5.42   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.76   | 4.60              | 4.60   | 5.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.76   | 4.60              | 4.60   | 5.42   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.36   | 9.03              | 9.02   | 10.64  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.32   | 8.98              | 8.98   | 10.59  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.36   | 9.03              | 9.02   | 10.64  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.73   | 8.26              | 8.26   | 9.74   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 4.97   | 6.12              | 6.12   | 7.22   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.97   | 6.12              | 6.12   | 7.22   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.97   | 6.12              | 6.12   | 7.22   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.97   | 6.12              | 6.12   | 7.22   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.97   | 6.12              | 6.12   | 7.22   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.03   | 1.27              | 1.27   | 1.50   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.24   | 4.14              | 4.14   | 4.93   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.52   | 0.67              | 0.67   | 0.80   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.56   | 0.70              | 0.70   | 0.83   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.33   | 0.42              | 0.42   | 0.50   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.20   | 1.49              | 1.49   | 1.76   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.18   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.05   | 1.39              | 1.39   | 1.67   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.46   | 4.47              | 4.47   | 5.34   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.44   | 4.44              | 4.44   | 5.31   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.44   | 4.44              | 4.44   | 5.31   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.25   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.25   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.40   | 0.51              | 0.51   | 0.60   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.64   | 0.82              | 0.82   | 0.97   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.22   | 0.27   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.85   | 1.08              | 1.08   | 1.28   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.99   | 1.25              | 1.25   | 1.49   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.63   |



**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.31   | 0.40              | 0.40   | 0.47   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.87   | 1.11              | 1.11   | 1.32   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.81   | 0.99              | 0.99   | 1.16   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.22              | 0.22   | 0.27   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.73   | 0.89              | 0.89   | 1.05   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.42   | 6.63              | 6.62   | 7.80   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.41   | 6.61              | 6.61   | 7.79   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.32   | 6.51              | 6.51   | 7.67   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.36   | 0.45              | 0.45   | 0.53   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |

**Table A-32. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.55   | 0.68              | 0.68   | 0.81   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.42   | 0.53              | 0.53   | 0.63   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.04   | 1.28              | 1.28   | 1.52   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.30   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.29   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00               | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-33. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.15              | 0.14   | 0.20   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.18   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.14   | 0.20   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.09   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.23   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.04   | 0.06   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.04   | 0.06   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.12   | 0.16              | 0.16   | 0.22   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.19   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |



**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.29   | 0.43              | 0.50   | 0.69   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.43              | 0.50   | 0.69   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.25   | 0.33              | 0.33   | 0.46   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.26   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.34              | 0.34   | 0.47   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10               | 0.10   | 0.13   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.11   | 0.15               | 0.15   | 0.21   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.11   | 0.14               | 0.14   | 0.20   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.07               | 0.07   | 0.10   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08               | 0.08   | 0.11   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08               | 0.08   | 0.11   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01               | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04               | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04               | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04               | 0.04   | 0.05   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04               | 0.04   | 0.05   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02               | 0.02   | 0.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.02               | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.18   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |

Table A-34. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2025

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.42   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.18              | 0.19   | 0.24   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.18              | 0.19   | 0.24   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.44              | 0.44   | 0.53   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.44              | 0.44   | 0.53   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.45              | 0.45   | 0.54   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.36   | 0.44              | 0.43   | 0.51   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.37   | 0.45              | 0.44   | 0.52   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.28   | 0.36              | 0.36   | 0.44   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.27   | 0.36              | 0.36   | 0.43   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.27   | 0.36              | 0.36   | 0.43   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |



**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.79   | 1.30              | 1.35   | 1.71   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 1.30              | 1.35   | 1.71   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.74   | 0.91              | 0.90   | 1.07   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.08   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.77   | 0.92              | 0.92   | 1.09   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.76   | 0.92              | 0.92   | 1.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.08   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.39              | 0.38   | 0.46   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.05   | 0.06   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 0.90              | 0.90   | 1.07   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.19   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.19   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |



**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-35. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.64   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.43   | 0.50              | 0.50   | 0.58   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.64   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.21   | 0.24              | 0.24   | 0.28   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.26              | 0.26   | 0.33   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.26              | 0.26   | 0.33   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.45              | 0.44   | 0.52   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.24   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.74   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.16   | 0.18              | 0.18   | 0.21   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.25   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.17              | 0.17   | 0.20   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.17              | 0.17   | 0.20   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.52   | 0.61              | 0.61   | 0.71   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.62              | 0.62   | 0.72   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.10   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.24   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.24   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.13              | 0.13   | 0.16   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.40   | 0.51              | 0.51   | 0.60   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.50   | 0.59   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.50   | 0.59   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |



**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.10   | 1.85              | 1.85   | 2.33   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.10   | 1.85              | 1.85   | 2.33   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.20   | 0.24   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.18   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.13   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.07   | 1.27              | 1.27   | 1.48   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.25   | 0.29              | 0.29   | 0.34   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.17   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.10   | 1.29              | 1.28   | 1.49   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.61   | 0.72              | 0.71   | 0.83   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.10   | 1.29              | 1.29   | 1.50   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.10   | 1.29              | 1.29   | 1.49   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.10   | 1.29              | 1.28   | 1.49   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.42   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.42   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.49   | 0.58              | 0.58   | 0.67   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.54              | 0.54   | 0.63   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.28              | 0.28   | 0.33   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.30              | 0.29   | 0.34   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.29              | 0.29   | 0.34   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.14   | 0.16              | 0.16   | 0.18   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.14   | 0.16              | 0.16   | 0.18   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.13   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.06   | 1.26              | 1.26   | 1.47   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.41   | 0.49              | 0.49   | 0.57   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |



**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.45   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.45   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.33   | 0.38              | 0.38   | 0.44   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.13   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |

**Table A-36. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.62              | 0.64   | 0.77   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.15   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.15   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.99   | 2.58              | 2.70   | 3.20   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.99   | 2.58              | 2.70   | 3.20   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.11   | 1.43              | 1.50   | 1.78   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.38   | 0.49              | 0.51   | 0.61   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.38   | 0.49              | 0.51   | 0.61   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.14   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.34   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.28   | 0.33   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.28   | 0.33   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.28   | 0.33   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.77   | 0.99              | 1.03   | 1.24   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.77   | 0.99              | 1.03   | 1.24   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.77   | 0.99              | 1.03   | 1.24   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.18   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.30   | 0.39              | 0.40   | 0.48   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.32   | 0.41              | 0.42   | 0.51   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.32   | 0.41              | 0.42   | 0.51   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.21   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.21   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.21   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.35              | 0.37   | 0.44   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.06   | 2.67              | 2.79   | 3.32   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.06   | 2.67              | 2.79   | 3.32   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.29   | 0.34   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.21   | 0.28              | 0.29   | 0.34   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.36              | 0.38   | 0.45   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.36              | 0.37   | 0.44   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.38   | 0.49              | 0.51   | 0.61   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.41   | 0.53              | 0.56   | 0.66   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.70   | 0.91              | 0.95   | 1.13   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.48   | 1.90              | 1.98   | 2.38   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.29   | 1.67              | 1.75   | 2.07   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.29   | 1.67              | 1.75   | 2.07   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.48   | 1.90              | 1.98   | 2.38   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.48   | 1.90              | 1.98   | 2.38   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.48   | 1.90              | 1.98   | 2.38   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.48   | 1.90              | 1.98   | 2.38   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.48   | 1.90              | 1.98   | 2.38   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.38   | 0.49              | 0.52   | 0.61   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.45              | 0.47   | 0.56   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.31              | 0.32   | 0.38   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.23   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.48   | 0.62              | 0.64   | 0.77   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.42   | 0.53              | 0.54   | 0.68   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.29   | 0.37              | 0.38   | 0.47   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.42   | 0.53              | 0.54   | 0.68   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.42   | 0.53              | 0.54   | 0.68   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.42   | 0.53              | 0.54   | 0.68   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.37   | 0.48              | 0.50   | 0.60   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.26   | 1.62              | 1.70   | 2.02   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.26   | 1.62              | 1.70   | 2.02   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.29   | 1.67              | 1.74   | 2.08   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.29   | 1.66              | 1.73   | 2.07   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.48   | 1.90              | 1.98   | 2.38   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.16   | 0.20              | 0.21   | 0.26   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.16   | 0.20              | 0.21   | 0.26   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.26   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.19   | 0.23   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.22              | 0.23   | 0.28   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.20   | 0.24   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.58   | 2.04              | 2.13   | 2.54   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.58   | 2.04              | 2.13   | 2.54   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.58   | 2.04              | 2.13   | 2.54   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.57   | 2.03              | 2.12   | 2.53   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.13              | 0.14   | 0.17   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.11   | 0.13              | 0.14   | 0.17   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.11   | 0.13              | 0.14   | 0.17   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.14   | 0.17   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.14   | 0.17   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.63   | 0.81              | 0.85   | 1.01   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.39   | 0.50              | 0.52   | 0.62   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.39   | 0.50              | 0.52   | 0.62   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.39   | 0.50              | 0.52   | 0.62   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.52   | 0.62   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |



**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.29   | 1.67              | 1.75   | 2.07   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.31              | 0.33   | 0.39   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.24   | 0.31              | 0.33   | 0.39   |

**Table A-37. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.61  | -0.76             | -0.74  | -0.87  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.70  | -3.22             | -3.02  | -3.48  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.52  | -3.11             | -3.02  | -3.59  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.23  | -1.51             | -1.47  | -1.75  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.44  | -0.54             | -0.53  | -0.63  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.15             | -0.14  | -0.16  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.14             | -0.13  | -0.15  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.10  | -1.35             | -1.31  | -1.56  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.36  | -1.68             | -1.63  | -1.94  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.36  | -1.68             | -1.63  | -1.94  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.26  | -0.32             | -0.31  | -0.37  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.26  | -0.32             | -0.31  | -0.37  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.21  | -0.26             | -0.25  | -0.29  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.16             | -0.16  | -0.19  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.50  | -0.62             | -0.60  | -0.71  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.81   | 8.27              | 12.08  | 17.99  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.10              | 0.13   | 0.18   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.49             | -0.47  | -0.56  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.16             | -0.15  | -0.18  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.14  | -1.37             | -1.30  | -1.52  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.23  | -1.51             | -1.47  | -1.74  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -13.33 | -16.42            | -15.96 | -18.98 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -12.16 | -14.98            | -14.56 | -17.32 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -13.34 | -16.43            | -15.98 | -19.00 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.41              | 0.83   | 1.37   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -5.92  | -7.29             | -7.09  | -8.43  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -5.83  | -7.18             | -6.98  | -8.30  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.92  | -7.29             | -7.09  | -8.43  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 41.59  | 67.38             | 83.75  | 115.98 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 41.59  | 67.38             | 83.75  | 115.98 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 22.91  | 37.19             | 46.28  | 64.13  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.60  | -0.74             | -0.72  | -0.85  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.10   | 13.06             | 16.17  | 22.36  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.27   | 13.26             | 16.37  | 22.59  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.41  | -2.94             | -2.82  | -3.32  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.42  | -2.94             | -2.82  | -3.32  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -2.42  | -2.94             | -2.82  | -3.32  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.61  | -0.76             | -0.74  | -0.87  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -1.20  | -1.38             | -1.24  | -1.38  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -10.53 | -12.88            | -12.42 | -14.67 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -1.52  | -1.88             | -1.83  | -2.17  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.57   | 7.33              | 9.05   | 12.49  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -2.02  | -2.49             | -2.42  | -2.87  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.12  | -0.15             | -0.14  | -0.17  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.62   | 6.09              | 7.76   | 10.88  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.62   | 6.09              | 7.76   | 10.88  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.62   | 6.09              | 7.76   | 10.88  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.11  | -0.14             | -0.13  | -0.16  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.43  | -0.53             | -0.51  | -0.61  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.72  | -0.89             | -0.87  | -1.03  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.72  | -0.89             | -0.87  | -1.03  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.72  | -0.89             | -0.87  | -1.03  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -2.50  | -3.08             | -2.99  | -3.56  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -5.16  | -6.36             | -6.18  | -7.35  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -5.00  | -6.16             | -5.99  | -7.12  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.94  | -1.07             | -0.94  | -1.02  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.88   | 7.86              | 13.92  | 22.19  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.88   | 7.86              | 13.92  | 22.19  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.63   | 7.56              | 13.62  | 21.84  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.39  | -0.48             | -0.46  | -0.55  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.39  | -0.48             | -0.46  | -0.55  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.38  | -0.47             | -0.46  | -0.54  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.60  | -5.65             | -5.48  | -6.50  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.65  | -5.71             | -5.54  | -6.57  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.44  | -5.46             | -5.29  | -6.28  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -3.00  | -3.66             | -3.51  | -4.13  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.60  | -0.74             | -0.72  | -0.86  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.52  | -0.64             | -0.62  | -0.74  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.86  | -2.29             | -2.23  | -2.65  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -5.85  | -7.20             | -7.00  | -8.33  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -5.84  | -7.20             | -7.00  | -8.32  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.38  | -6.63             | -6.44  | -7.66  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -5.33  | -6.56             | -6.38  | -7.58  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.00  | -1.21             | -1.15  | -1.34  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.14  | -5.10             | -4.96  | -5.90  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.14  | -5.10             | -4.96  | -5.90  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.74  | -4.61             | -4.48  | -5.33  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.17             | -0.17  | -0.20  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.43  | -1.76             | -1.71  | -2.04  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.85  | -2.28             | -2.22  | -2.64  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -14.63 | -17.96            | -17.40 | -20.63 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -14.93 | -18.34            | -17.76 | -21.06 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.50  | -3.07             | -2.99  | -3.55  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.16  | -2.66             | -2.59  | -3.08  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.87   | 3.25              | 5.62   | 8.89   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.54  | 1.55              | 4.02   | 7.04   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.54  | 1.55              | 4.02   | 7.04   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.89  | -1.83             | -1.22  | -0.94  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.77   | 1.44              | 1.97   | 2.84   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.67  | -10.18            | -9.33  | -10.59 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -8.46  | -9.93             | -9.08  | -10.29 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -8.46  | -9.93             | -9.08  | -10.29 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.10  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.22  | -0.27             | -0.26  | -0.31  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.95   | 9.56              | 11.81  | 16.30  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.95   | 1.56              | 1.94   | 2.69   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.50   | 1.12              | 1.65   | 2.48   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.31   | 2.11              | 2.62   | 3.63   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.49  | -0.60             | -0.58  | -0.69  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.44  | -0.55             | -0.53  | -0.63  |



**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.58  | -0.71             | -0.69  | -0.82  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -0.73  | -0.91             | -0.88  | -1.05  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.14   | 0.23              | 0.29   | 0.41   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.09   | 0.17              | 0.24   | 0.35   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.10  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.35  | -1.67             | -1.62  | -1.93  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.24  | -0.29             | -0.28  | -0.33  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.90  | -1.11             | -1.07  | -1.28  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.41  | -0.51             | -0.50  | -0.59  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -0.91  | -1.13             | -1.09  | -1.30  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -1.08  | -1.33             | -1.29  | -1.53  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.84  | -2.27             | -2.20  | -2.62  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.93   | 1.50              | 1.85   | 2.55   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -3.34  | -4.11             | -4.00  | -4.76  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -3.34  | -4.11             | -4.00  | -4.75  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.64  | -0.74             | -0.66  | -0.74  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.10  | -0.12  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.13  | -0.16             | -0.15  | -0.18  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.36  | -2.91             | -2.83  | -3.37  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.63  | -2.01             | -1.95  | -2.32  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.05   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.05   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.23  | -0.28             | -0.27  | -0.32  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.92  | -2.37             | -2.30  | -2.73  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.80  | -2.22             | -2.16  | -2.57  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.52  | -3.11             | -3.02  | -3.59  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -2.22  | -2.73             | -2.66  | -3.16  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.46  | -0.57             | -0.55  | -0.66  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 32.48  | 56.25             | 73.03  | 103.32 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 32.49  | 56.26             | 73.04  | 103.33 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 4.18   | 6.86              | 8.59   | 11.95  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.85   | 6.44              | 8.19   | 11.47  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.41  | -0.51             | -0.49  | -0.58  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.51  | -0.62             | -0.61  | -0.72  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.51  | -0.62             | -0.61  | -0.72  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.50  | -0.62             | -0.60  | -0.71  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.96   | 1.56              | 1.94   | 2.69   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.18  | -0.23             | -0.22  | -0.26  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -4.98  | -6.14             | -5.96  | -7.09  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -3.84  | -4.73             | -4.60  | -5.47  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.96  | -1.18             | -1.15  | -1.37  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.29  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.37  | -0.45             | -0.44  | -0.52  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.39  | -0.48             | -0.46  | -0.55  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.39  | -0.48             | -0.46  | -0.55  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.30  | -0.37             | -0.36  | -0.42  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.14             | -0.14  | -0.17  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.22  | -0.28             | -0.27  | -0.32  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.25  | -0.30             | -0.29  | -0.35  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.25  | -0.30             | -0.29  | -0.35  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.39  | -1.71             | -1.67  | -1.98  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.68  | -4.54             | -4.41  | -5.25  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.28  | -0.35             | -0.34  | -0.40  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.84   | 1.41              | 1.80   | 2.52   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.84   | 1.41              | 1.80   | 2.52   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.16             | -0.16  | -0.19  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.13  | -0.16             | -0.16  | -0.19  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.14  | -0.18             | -0.17  | -0.20  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.47  | -3.04             | -2.95  | -3.51  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.50  | -1.85             | -1.79  | -2.13  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.96  | -2.42             | -2.35  | -2.79  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.96  | -2.42             | -2.35  | -2.79  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.44  | -0.54             | -0.52  | -0.62  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.14  | -0.18             | -0.17  | -0.20  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.54  | -0.66             | -0.64  | -0.76  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.35   | 8.82              | 11.09  | 15.45  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.63   | 9.16              | 11.42  | 15.84  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.03  | -1.27             | -1.23  | -1.46  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.03  | -1.27             | -1.23  | -1.46  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.03  | -1.27             | -1.23  | -1.46  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.03  | -1.27             | -1.23  | -1.46  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.44  | -0.55             | -0.53  | -0.63  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.27  | -1.56             | -1.52  | -1.81  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -2.99  | -3.65             | -3.50  | -4.12  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -3.03  | -3.69             | -3.54  | -4.17  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 8.27   | 13.26             | 16.37  | 22.59  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.66   | 14.00             | 17.37  | 24.04  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.03  | 24.22             | 30.00  | 41.46  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.18  | -0.22             | -0.22  | -0.26  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.15  | -0.18             | -0.18  | -0.21  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.60  | 8.46              | 20.01  | 34.38  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 26.15  | 42.64             | 53.22  | 73.87  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 26.15  | 42.64             | 53.22  | 73.87  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -1.62  | 8.43              | 19.98  | 34.34  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | -1.62  | 8.43              | 19.98  | 34.35  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -1.61  | 8.44              | 19.99  | 34.35  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -1.62  | 8.43              | 19.98  | 34.35  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.60  | 8.46              | 20.01  | 34.38  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.47  | -3.03             | -2.94  | -3.49  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.38  | -2.93             | -2.84  | -3.37  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.29  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.63   | 12.47             | 15.61  | 21.68  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.47  | -0.58             | -0.56  | -0.67  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.47  | -0.58             | -0.56  | -0.67  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.52   | 12.10             | 14.96  | 20.66  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.17  | -0.21             | -0.21  | -0.25  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.24  | -0.29             | -0.28  | -0.34  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -7.14  | -8.80             | -8.55  | -10.17 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.89  | -1.09             | -1.06  | -1.26  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.28             | -0.27  | -0.33  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.19   | 8.33              | 10.29  | 14.21  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.83  | -1.02             | -0.99  | -1.18  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.19  | -0.23             | -0.23  | -0.27  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.17   | 2.52              | 3.68   | 5.48   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 2.19              | 3.35   | 5.09   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.53   | 1.74              | 2.92   | 4.57   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -3.15  | -3.83             | -3.67  | -4.32  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.28  | -2.78             | -2.67  | -3.15  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.55   | 7.94              | 11.76  | 17.61  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.71   | 1.20              | 1.54   | 2.16   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 1.21              | 1.55   | 2.17   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.38  | -0.47             | -0.45  | -0.53  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.23             | -0.22  | -0.26  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.10  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.05  | -0.05  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.33  | -0.41             | -0.40  | -0.48  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.37  | -0.45             | -0.44  | -0.52  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.15  | -0.18             | -0.18  | -0.21  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.65  | -4.50             | -4.37  | -5.20  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.29  | -0.36             | -0.35  | -0.41  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.29  | -0.36             | -0.35  | -0.41  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.70  | -2.09             | -2.03  | -2.42  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.05   | 0.06   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.10  | -1.36             | -1.32  | -1.57  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -26.61 | -31.08            | -28.29 | -31.90 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -13.52 | -15.24            | -13.22 | -14.28 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -26.73 | -31.23            | -28.43 | -32.08 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -26.63 | -31.11            | -28.32 | -31.94 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -26.61 | -31.08            | -28.29 | -31.90 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -3.17  | -3.91             | -3.80  | -4.52  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.29  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.39  | -0.48             | -0.46  | -0.55  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.19  | -0.24             | -0.23  | -0.28  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.55   | 0.96              | 1.25   | 1.76   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.01   | 10.33             | 13.34  | 18.82  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.98  | 31.94             | 42.12  | 60.03  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.98  | 31.94             | 42.12  | 60.03  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.83  | 25.60             | 35.95  | 52.69  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.74  | 26.72             | 37.04  | 53.99  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -6.84  | -8.42             | -8.19  | -9.74  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -7.17  | -8.83             | -8.59  | -10.21 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -7.16  | -8.83             | -8.58  | -10.20 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.22   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.12  | -0.15             | -0.14  | -0.17  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.06  | -0.08  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.79  | -0.97             | -0.94  | -1.12  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.36  | -0.44             | -0.42  | -0.49  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -3.36  | -3.96             | -3.65  | -4.16  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.36  | -3.96             | -3.65  | -4.16  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.01  | -3.53             | -3.23  | -3.66  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.01  | -3.53             | -3.23  | -3.66  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.26  | -2.78             | -2.70  | -3.20  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.42  | -1.75             | -1.70  | -2.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.92  | -2.36             | -2.29  | -2.73  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.22             | -0.21  | -0.25  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.86  | -2.30             | -2.23  | -2.65  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.02  | 0.02              | 0.07   | 0.12   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.66  | -0.77             | -0.69  | -0.78  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -2.70  | -3.33             | -3.23  | -3.85  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -4.56  | -5.62             | -5.46  | -6.50  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.85  | -1.05             | -1.02  | -1.21  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.85  | -1.05             | -1.02  | -1.21  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.85  | -1.05             | -1.02  | -1.21  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.64  | -0.79             | -0.77  | -0.92  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -1.83  | -1.92             | -1.48  | -1.41  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.89  | -1.09             | -1.06  | -1.26  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.89  | -1.09             | -1.06  | -1.26  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.04  | -1.28             | -1.24  | -1.47  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | -1.47  | 8.62              | 20.16  | 34.56  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.50  | -3.08             | -3.00  | -3.56  |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.60  | -0.74             | -0.72  | -0.85  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.28  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.15              | 0.20   | 0.29   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.63  | -3.24             | -3.15  | -3.75  |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.41  | -2.98             | -2.89  | -3.44  |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -1.80  | -1.17             | 0.05   | 1.13   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -1.80  | -1.17             | 0.05   | 1.13   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.72  | -1.07             | 0.15   | 1.24   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.48  | -0.59             | -0.58  | -0.69  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.71   | 4.47              | 5.62   | 7.82   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.26   | 1.57              | 2.93   | 4.75   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.20   | 2.60              | 3.80   | 5.65   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.20   | 2.60              | 3.80   | 5.65   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.19  | -1.47             | -1.43  | -1.70  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -6.54  | -8.05             | -7.83  | -9.31  |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -6.55  | -8.07             | -7.85  | -9.33  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -6.54  | -8.06             | -7.84  | -9.32  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.97  | 36.79             | 49.54  | 71.29  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 20.04  | 36.87             | 49.62  | 71.38  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.97  | 36.79             | 49.54  | 71.29  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 21.07  | 38.14             | 50.86  | 72.85  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -7.49  | -8.83             | -8.13  | -9.26  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -7.49  | -8.83             | -8.13  | -9.26  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -7.49  | -8.83             | -8.13  | -9.26  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.49  | -8.82             | -8.13  | -9.26  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.49  | -8.82             | -8.13  | -9.26  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.27              | 0.33   | 0.46   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.79  | -2.20             | -2.14  | -2.55  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.50  | -0.61             | -0.59  | -0.71  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -5.29  | -6.48             | -6.27  | -7.42  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.79  | -0.94             | -0.88  | -1.01  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.25  | -0.30             | -0.29  | -0.35  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.25  | -0.30             | -0.29  | -0.35  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.11  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.97  | -1.19             | -1.16  | -1.38  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -0.57  | -0.70             | -0.68  | -0.81  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.58  | -0.72             | -0.70  | -0.83  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -2.07  | -2.55             | -2.48  | -2.95  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.32  | -0.39             | -0.38  | -0.45  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 13.70  | 21.99             | 27.15  | 37.47  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.72  | -2.12             | -2.06  | -2.45  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.99   | 5.29              | 8.34   | 12.80  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.04   | 5.34              | 8.40   | 12.86  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.04   | 5.34              | 8.40   | 12.86  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.42  | -0.51             | -0.50  | -0.59  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.13  | -0.15             | -0.15  | -0.18  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.21  | -0.25             | -0.23  | -0.26  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.21  | -0.25             | -0.23  | -0.26  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.21  | -0.25             | -0.23  | -0.26  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.70  | -0.85             | -0.81  | -0.96  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.01  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.06  | -1.30             | -1.26  | -1.50  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | 0.07              | 0.17   | 0.30   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.26              | 0.36   | 0.52   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.24             | -0.24  | -0.28  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.14  | -0.17             | -0.17  | -0.20  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.87   | 11.54             | 14.70  | 20.60  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.65  | -2.03             | -1.98  | -2.35  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.06  | -0.08  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.05  | -0.05             | -0.04  | -0.05  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.66  | -0.77             | -0.69  | -0.78  |



**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.53  | -0.65             | -0.63  | -0.75  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 26.58  | 43.16             | 53.74  | 74.48  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -1.43  | -1.76             | -1.71  | -2.03  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | 0.07              | 0.17   | 0.30   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.16  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.82   | 2.92              | 3.61   | 4.98   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.80   | 2.90              | 3.59   | 4.96   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.79   | 2.89              | 3.58   | 4.96   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.28  | -1.58             | -1.54  | -1.83  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -9.46  | -11.66            | -11.34 | -13.48 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.45  | -11.64            | -11.31 | -13.45 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -9.30  | -11.46            | -11.14 | -13.25 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.64  | -0.79             | -0.77  | -0.91  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.18  | -0.23             | -0.22  | -0.26  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.97              | 2.48   | 3.46   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.16  | -0.20             | -0.19  | -0.23  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.76   | 7.80              | 9.77   | 13.59  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.76   | 7.80              | 9.77   | 13.59  |

**Table A-38. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.72  | -0.89             | -0.86  | -1.03  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.44  | -0.54             | -0.52  | -0.62  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.11  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.22  | -0.27             | -0.27  | -0.32  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.93  | -1.15             | -1.12  | -1.33  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -0.72  | -0.89             | -0.86  | -1.02  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.79  | -2.21             | -2.15  | -2.55  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.37  | -0.46             | -0.44  | -0.53  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.32  | -0.39             | -0.38  | -0.46  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.77  | -1.91             | -1.89  | -2.11  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.81  | -7.80             | -7.65  | -8.29  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.24  | -7.80             | -7.73  | -8.65  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.53  | -3.80             | -3.76  | -4.20  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.26  | -1.36             | -1.35  | -1.51  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.41  | -0.40             | -0.39  | -0.41  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.04              | 0.05   | 0.07   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.29  | -0.27             | -0.26  | -0.27  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.14  | -3.39             | -3.35  | -3.75  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.92  | -4.22             | -4.18  | -4.67  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.92  | -4.22             | -4.18  | -4.67  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.75  | -0.81             | -0.80  | -0.90  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.74  | -0.80             | -0.79  | -0.88  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.58  | -0.63             | -0.62  | -0.70  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.38  | -0.41             | -0.40  | -0.45  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.44  | -1.55             | -1.54  | -1.72  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.99   | 30.94             | 33.31  | 46.64  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.33              | 0.35   | 0.46   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.14  | -1.23             | -1.21  | -1.36  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.36  | -0.39             | -0.39  | -0.44  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.27  | -3.37             | -3.32  | -3.64  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.52  | -3.79             | -3.75  | -4.20  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.10  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -38.24 | -41.24            | -40.84 | -45.70 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -34.89 | -37.62            | -37.26 | -41.69 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -38.27 | -41.27            | -40.87 | -45.73 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.30  | -0.33             | -0.33  | -0.36  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.14  | 2.10              | 2.36   | 3.63   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -16.99 | -18.32            | -18.15 | -20.30 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -16.74 | -18.05            | -17.88 | -20.00 |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -16.99 | -18.32            | -18.15 | -20.30 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 110.59 | 215.18            | 225.18 | 294.26 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 110.59 | 215.18            | 225.18 | 294.26 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 60.87  | 118.90            | 124.46 | 162.75 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.10  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.31  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.72  | -1.85             | -1.84  | -2.06  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 21.59  | 41.57             | 43.47  | 56.70  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 22.06  | 42.07             | 43.97  | 57.26  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.94  | -7.28             | -7.19  | -7.95  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.95  | -7.29             | -7.20  | -7.96  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -6.95  | -7.29             | -7.20  | -7.96  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.77  | -1.91             | -1.89  | -2.11  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -3.53  | -3.25             | -3.15  | -3.28  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -30.29 | -32.11            | -31.73 | -35.26 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -4.38  | -4.72             | -4.67  | -5.23  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.19  | 23.26             | 24.31  | 31.66  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -5.79  | -6.24             | -6.18  | -6.92  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.04  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.34  | -0.37             | -0.37  | -0.41  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.25  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.51   | 19.93             | 20.96  | 27.72  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.51   | 19.93             | 20.96  | 27.72  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 9.51   | 19.93             | 20.96  | 27.72  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.32  | -0.35             | -0.34  | -0.39  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.23  | -1.33             | -1.31  | -1.47  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.07  | -2.24             | -2.22  | -2.48  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.07  | -2.24             | -2.22  | -2.48  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.07  | -2.24             | -2.22  | -2.48  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -7.17  | -7.73             | -7.66  | -8.57  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -14.85 | -16.01            | -15.85 | -17.74 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.40 | -15.52            | -15.37 | -17.20 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.75  | -2.43             | -2.33  | -2.37  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.35   | 35.54             | 39.35  | 58.58  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.35   | 35.54             | 39.35  | 58.58  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.63   | 34.76             | 38.58  | 57.72  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.11  | -1.20             | -1.19  | -1.33  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.51  | -0.55             | -0.55  | -0.61  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.11  | -1.20             | -1.19  | -1.33  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.10  | -1.19             | -1.18  | -1.32  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -13.20 | -14.16            | -14.01 | -15.65 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -13.34 | -14.31            | -14.17 | -15.82 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -12.75 | -13.68            | -13.54 | -15.11 |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -8.65  | -9.09             | -8.97  | -9.93  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.73  | -1.87             | -1.85  | -2.07  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.48  | -1.60             | -1.59  | -1.77  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -5.35  | -5.77             | -5.71  | -6.39  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -16.78 | -18.10            | -17.92 | -20.06 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -16.77 | -18.08            | -17.91 | -20.04 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -15.43 | -16.64            | -16.48 | -18.44 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -15.29 | -16.48            | -16.32 | -18.27 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.89  | -2.98             | -2.94  | -3.23  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -11.89 | -12.82            | -12.69 | -14.20 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -11.89 | -12.82            | -12.69 | -14.20 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -10.73 | -11.57            | -11.46 | -12.82 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.40  | -0.43             | -0.42  | -0.47  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.45  | -0.48             | -0.48  | -0.53  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.03  | -4.35             | -4.31  | -4.82  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.33  | -5.74             | -5.69  | -6.36  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -42.01 | -44.95            | -44.47 | -49.61 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -42.88 | -45.89            | -45.40 | -50.65 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.16  | -7.72             | -7.65  | -8.56  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.20  | -6.69             | -6.63  | -7.41  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.30   | 14.35             | 15.84  | 23.43  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -2.78  | 10.22             | 11.79  | 19.02  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -2.78  | 10.22             | 11.79  | 19.02  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.07  | -2.51             | -2.11  | -1.06  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.73   | 4.83              | 5.15   | 7.07   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -25.16 | -24.15            | -23.54 | -25.02 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -24.56 | -23.51            | -22.90 | -24.32 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -24.56 | -23.51            | -22.90 | -24.32 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.07             | -0.06  | -0.07  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.19  | -0.21             | -0.20  | -0.23  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.21  | -0.23             | -0.22  | -0.25  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.67  | -0.72             | -0.71  | -0.80  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.87  | 30.33             | 31.70  | 41.30  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.56   | 5.01              | 5.25   | 6.86   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.22   | 4.30              | 4.64   | 6.51   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.49   | 6.75              | 7.06   | 9.22   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.40  | -1.51             | -1.49  | -1.67  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.30  | -1.41             | -1.39  | -1.56  |



**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.66  | -1.78             | -1.77  | -1.98  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -2.12  | -2.29             | -2.27  | -2.54  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.37   | 0.76              | 0.80   | 1.06   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.23   | 0.62              | 0.66   | 0.90   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.21  | -0.23             | -0.22  | -0.25  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.88  | -4.18             | -4.14  | -4.64  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.67  | -0.72             | -0.71  | -0.80  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.57  | -2.78             | -2.75  | -3.08  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.19  | -1.28             | -1.27  | -1.42  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -2.62  | -2.83             | -2.80  | -3.13  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.17  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -3.08  | -3.30             | -3.26  | -3.64  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.29  | -5.70             | -5.64  | -6.32  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.49   | 4.75              | 4.96   | 6.46   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -9.57  | -10.32            | -10.22 | -11.44 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -9.57  | -10.31            | -10.22 | -11.43 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.85  | -1.72             | -1.67  | -1.75  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.29  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.36  | -0.39             | -0.39  | -0.43  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.79  | -7.32             | -7.25  | -8.11  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.68  | -5.04             | -5.00  | -5.59  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.08              | 0.09   | 0.12   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.07              | 0.08   | 0.12   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.65  | -0.70             | -0.70  | -0.78  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.51  | -5.94             | -5.88  | -6.58  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.17  | -5.57             | -5.52  | -6.18  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.23  | -7.80             | -7.72  | -8.64  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -6.38  | -6.88             | -6.81  | -7.62  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.32  | -1.43             | -1.41  | -1.58  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.10  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 84.41  | 187.48            | 197.81 | 263.87 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 84.42  | 187.49            | 197.83 | 263.89 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.29  | -0.32             | -0.31  | -0.35  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 11.08  | 22.08             | 23.14  | 30.36  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 10.11  | 21.04             | 22.11  | 29.21  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.25  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.19  | -1.28             | -1.27  | -1.42  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.45  | -1.56             | -1.55  | -1.73  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.45  | -1.56             | -1.55  | -1.73  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.44  | -1.56             | -1.54  | -1.72  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.57   | 5.02              | 5.26   | 6.87   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.53  | -0.57             | -0.56  | -0.63  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -14.29 | -15.41            | -15.26 | -17.08 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -11.03 | -11.89            | -11.78 | -13.18 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -2.69  | -2.90             | -2.87  | -3.21  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.59  | -0.63             | -0.63  | -0.70  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.30  | -0.33             | -0.33  | -0.36  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.08  | -1.16             | -1.15  | -1.29  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.11  | -1.19             | -1.18  | -1.32  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.11  | -1.19             | -1.18  | -1.32  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.35  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.85  | -0.92             | -0.91  | -1.02  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.34  | -0.37             | -0.37  | -0.41  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.65  | -0.70             | -0.69  | -0.77  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.70  | -0.76             | -0.75  | -0.84  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.70  | -0.76             | -0.75  | -0.84  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.99  | -4.31             | -4.26  | -4.77  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.57 | -11.40            | -11.29 | -12.64 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.81  | -0.88             | -0.87  | -0.97  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.26   | 4.69              | 4.92   | 6.50   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.26   | 4.69              | 4.92   | 6.50   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.15  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.42  | -0.46             | -0.45  | -0.50  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.42  | -0.45             | -0.45  | -0.50  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.46  | -0.49             | -0.49  | -0.54  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.08  | -7.63             | -7.56  | -8.46  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.30  | -4.64             | -4.59  | -5.14  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.62  | -6.06             | -6.01  | -6.72  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.62  | -6.06             | -6.01  | -6.72  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.25  | -1.35             | -1.34  | -1.49  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.43             | -0.43  | -0.48  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.54  | -1.66             | -1.64  | -1.84  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.22  | 28.55             | 29.94  | 39.34  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.03  | 29.43             | 30.81  | 40.31  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.06  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -2.95  | -3.18             | -3.15  | -3.52  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.95  | -3.18             | -3.15  | -3.52  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.95  | -3.18             | -3.15  | -3.52  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.95  | -3.18             | -3.15  | -3.52  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.30  | -1.41             | -1.39  | -1.56  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.64  | -3.93             | -3.89  | -4.35  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -8.63  | -9.06             | -8.95  | -9.91  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.72  | -9.17             | -9.05  | -10.02 |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.24  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 22.06  | 42.07             | 43.96  | 57.25  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 23.04  | 44.62             | 46.68  | 60.95  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.04              | 0.05   | 0.07   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.04              | 0.05   | 0.07   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 40.04  | 77.07             | 80.60  | 105.14 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.52  | -0.56             | -0.56  | -0.62  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.43  | -0.46             | -0.46  | -0.52  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -10.45 | 50.70             | 58.01  | 92.23  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 69.50  | 136.85            | 143.33 | 187.67 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 69.50  | 136.85            | 143.33 | 187.67 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -10.52 | 50.62             | 57.93  | 92.14  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | -10.52 | 50.63             | 57.94  | 92.15  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -10.50 | 50.64             | 57.96  | 92.17  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -10.51 | 50.63             | 57.94  | 92.16  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -10.45 | 50.70             | 58.01  | 92.23  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.09  | -7.60             | -7.52  | -8.40  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.83  | -7.33             | -7.25  | -8.10  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.59  | -0.64             | -0.63  | -0.70  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.26  | 40.14             | 42.05  | 55.12  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.35  | -1.46             | -1.44  | -1.61  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.35  | -1.46             | -1.44  | -1.61  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.05  | 38.45             | 40.19  | 52.39  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.48  | -0.52             | -0.52  | -0.58  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.68  | -0.74             | -0.73  | -0.82  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -20.47 | -22.08            | -21.86 | -24.47 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.51  | -2.71             | -2.68  | -3.00  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.65  | -0.71             | -0.70  | -0.78  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.83  | 26.44             | 27.64  | 36.00  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.38  | -2.56             | -2.54  | -2.84  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.24  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.56  | -0.61             | -0.60  | -0.67  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.76   | 9.43              | 10.15  | 14.19  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.98   | 8.59              | 9.31   | 13.26  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.94   | 7.46              | 8.20   | 12.01  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -9.06  | -9.50             | -9.37  | -10.37 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.55  | -6.91             | -6.82  | -7.56  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.22   | 30.10             | 32.49  | 45.71  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.85   | 3.94              | 4.15   | 5.51   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.87   | 3.97              | 4.18   | 5.54   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.04  | -1.11             | -1.09  | -1.22  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.55  | -0.60             | -0.59  | -0.66  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.17  | -0.14             | -0.13  | -0.12  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.96  | -1.03             | -1.02  | -1.14  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.12             | -0.12  | -0.14  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.05  | -1.13             | -1.12  | -1.26  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.44  | -0.47             | -0.47  | -0.52  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.47 | -11.29            | -11.19 | -12.52 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.81  | -0.87             | -0.86  | -0.97  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.81  | -0.87             | -0.86  | -0.96  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.87  | -5.25             | -5.20  | -5.82  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.12              | 0.12   | 0.17   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.16  | -3.41             | -3.38  | -3.78  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -77.29 | -73.21            | -71.24 | -75.25 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -39.63 | -34.32            | -32.93 | -33.15 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -77.64 | -73.59            | -71.61 | -75.67 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -77.40 | -73.33            | -71.35 | -75.38 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -77.29 | -73.21            | -71.24 | -75.25 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.31  | -0.34             | -0.33  | -0.37  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.27  | -0.29             | -0.28  | -0.32  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -9.12  | -9.83             | -9.74  | -10.90 |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.57  | -0.62             | -0.61  | -0.68  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.11  | -1.20             | -1.19  | -1.33  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.55  | -0.60             | -0.59  | -0.66  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.23  | -0.25             | -0.24  | -0.27  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.47  | -0.51             | -0.50  | -0.56  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.37   | 3.13              | 3.31   | 4.44   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.68  | 34.24             | 36.09  | 48.03  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 46.28  | 108.10            | 114.38 | 153.64 |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.28  | 108.10            | 114.38 | 153.64 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 31.46  | 92.12             | 98.56  | 135.94 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 34.05  | 94.91             | 101.32 | 139.03 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -19.59 | -21.12            | -20.92 | -23.41 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.56 | -22.17            | -21.96 | -24.57 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.54 | -22.15            | -21.94 | -24.55 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.41              | 0.43   | 0.57   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.37  | -0.39             | -0.39  | -0.44  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.20  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.30  | -2.49             | -2.46  | -2.75  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.99  | -1.02             | -1.01  | -1.11  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -9.74  | -9.45             | -9.22  | -9.85  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.74  | -9.45             | -9.22  | -9.85  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.75  | -8.37             | -8.16  | -8.66  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.75  | -8.37             | -8.16  | -8.66  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.21  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -6.51  | -6.99             | -6.92  | -7.73  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -4.08  | -4.38             | -4.33  | -4.84  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.50  | -5.93             | -5.87  | -6.57  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.52  | -0.56             | -0.56  | -0.63  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.35  | -5.76             | -5.71  | -6.38  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.08  | 0.18              | 0.21   | 0.35   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.91  | -1.80             | -1.75  | -1.84  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.12             | -0.12  | -0.14  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -7.75  | -8.36             | -8.28  | -9.26  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -13.10 | -14.13            | -13.99 | -15.65 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -2.45  | -2.64             | -2.61  | -2.92  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -2.45  | -2.64             | -2.61  | -2.92  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -2.45  | -2.64             | -2.61  | -2.92  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.82  | -1.96             | -1.94  | -2.17  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -5.44  | -3.85             | -3.56  | -3.09  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.47  | -2.67             | -2.64  | -2.95  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.47  | -2.67             | -2.64  | -2.95  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.89  | -3.11             | -3.08  | -3.45  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | -10.09 | 51.08             | 58.39  | 92.66  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.18  | -7.75             | -7.67  | -8.58  |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.72  | -1.85             | -1.83  | -2.05  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.57  | -0.62             | -0.61  | -0.68  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.20   | 0.52              | 0.55   | 0.75   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -7.39  | -7.97             | -7.90  | -8.84  |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -6.93  | -7.47             | -7.40  | -8.28  |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -5.75  | 0.04              | 0.82   | 3.67   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -5.76  | 0.04              | 0.82   | 3.67   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.56  | 0.25              | 1.03   | 3.91   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.41  | -1.52             | -1.51  | -1.69  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.22   | 14.47             | 15.17  | 19.92  |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 7.47              | 8.33   | 12.59  |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.82   | 9.72              | 10.47  | 14.66  |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.82   | 9.72              | 10.47  | 14.66  |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.22  | -3.47             | -3.44  | -3.85  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -18.76 | -20.23            | -20.04 | -22.42 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -18.80 | -20.27            | -20.08 | -22.47 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -18.78 | -20.25            | -20.06 | -22.44 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 50.67  | 127.06            | 134.96 | 182.95 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 50.85  | 127.26            | 135.15 | 183.16 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 50.67  | 127.06            | 134.96 | 182.95 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 53.83  | 130.48            | 138.34 | 186.73 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -21.80 | -21.14            | -20.64 | -22.05 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -21.80 | -21.14            | -20.64 | -22.05 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -21.80 | -21.14            | -20.64 | -22.05 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -21.80 | -21.13            | -20.63 | -22.04 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -21.80 | -21.13            | -20.63 | -22.04 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.44   | 0.86              | 0.90   | 1.18   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.27  | -0.29             | -0.28  | -0.32  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.13  | -5.53             | -5.48  | -6.13  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.43  | -1.54             | -1.52  | -1.70  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -15.18 | -16.18            | -16.00 | -17.83 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.25  | -2.24             | -2.20  | -2.38  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.71  | -0.76             | -0.75  | -0.84  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.71  | -0.76             | -0.75  | -0.84  |

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.17  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -2.78  | -3.00             | -2.97  | -3.32  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.61  | -1.73             | -1.72  | -1.92  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.66  | -1.79             | -1.77  | -1.98  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.94  | -6.40             | -6.34  | -7.10  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.93  | -1.01             | -1.00  | -1.11  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 36.53  | 69.76             | 72.91  | 94.97  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -4.86  | -5.24             | -5.19  | -5.81  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 4.18   | 21.35             | 23.26  | 33.45  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 4.31   | 21.48             | 23.40  | 33.60  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 4.31   | 21.48             | 23.40  | 33.60  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.20  | -1.29             | -1.28  | -1.43  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.37  | -0.40             | -0.39  | -0.44  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.60  | -0.59             | -0.57  | -0.61  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.60  | -0.59             | -0.57  | -0.61  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.60  | -0.59             | -0.57  | -0.61  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.96  | -2.06             | -2.03  | -2.25  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.03             | -0.02  | -0.01  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.03  | -3.26             | -3.23  | -3.61  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.15  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.10  | 0.44              | 0.51   | 0.81   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.38   | 0.96              | 1.02   | 1.38   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.56  | -0.60             | -0.60  | -0.67  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.40  | -0.43             | -0.43  | -0.48  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.03  | 37.74             | 39.68  | 52.46  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.49  | -0.53             | -0.52  | -0.59  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.74  | -5.11             | -5.06  | -5.67  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.22  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.14  | -0.11             | -0.11  | -0.10  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.91  | -1.80             | -1.75  | -1.84  |



**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.51  | -1.63             | -1.61  | -1.80  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 70.62  | 138.06            | 144.53 | 189.02 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -4.11  | -4.42             | -4.38  | -4.89  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.19  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.10  | 0.44              | 0.51   | 0.81   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.31  | -0.34             | -0.33  | -0.37  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.86   | 9.28              | 9.70   | 12.64  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.80   | 9.23              | 9.65   | 12.59  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.78   | 9.21              | 9.63   | 12.57  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.68  | -3.97             | -3.93  | -4.40  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -27.16 | -29.29            | -29.01 | -32.46 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -27.11 | -29.23            | -28.95 | -32.39 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -26.69 | -28.78            | -28.50 | -31.89 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.80  | -1.94             | -1.92  | -2.15  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.54  | -0.58             | -0.58  | -0.64  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.10   | 6.31              | 6.62   | 8.71   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.48  | -0.52             | -0.51  | -0.57  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.59  | 25.10             | 26.31  | 34.52  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.59  | 25.10             | 26.31  | 34.52  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-39. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.07  | -2.23             | -2.21  | -2.47  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.29  | -1.40             | -1.38  | -1.55  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.64  | -0.69             | -0.68  | -0.77  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -2.68  | -2.89             | -2.86  | -3.20  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -2.06  | -2.23             | -2.20  | -2.47  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -5.14  | -5.54             | -5.49  | -6.14  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.07  | -1.15             | -1.14  | -1.27  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.91  | -0.98             | -0.97  | -1.09  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.52  | -2.64             | -2.64  | -2.93  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -11.12 | -10.72            | -10.70 | -11.47 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -10.27 | -10.78            | -10.77 | -11.93 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -5.01  | -5.24             | -5.24  | -5.79  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.79  | -1.88             | -1.88  | -2.08  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.65  | -0.62             | -0.62  | -0.66  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.09              | 0.09   | 0.12   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.27  | -0.21             | -0.21  | -0.21  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.46  | -4.68             | -4.68  | -5.17  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.56  | -5.82             | -5.82  | -6.45  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.56  | -5.82             | -5.82  | -6.45  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.07  | -1.12             | -1.12  | -1.24  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -1.05  | -1.10             | -1.10  | -1.22  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.81  | -0.85             | -0.85  | -0.94  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.53  | -0.56             | -0.56  | -0.62  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.04  | -2.14             | -2.14  | -2.37  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.55  | 44.69             | 45.18  | 62.89  |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.48              | 0.49   | 0.64   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.61  | -1.69             | -1.69  | -1.87  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.52  | -0.54             | -0.54  | -0.60  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.66  | -4.64             | -4.64  | -5.04  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.99  | -5.23             | -5.23  | -5.79  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.22  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.14             | -0.14  | -0.16  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -54.28 | -56.94            | -56.93 | -63.02 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -49.53 | -51.95            | -51.94 | -57.50 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -54.33 | -56.98            | -56.97 | -63.07 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.43  | -0.45             | -0.45  | -0.50  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.34  | 3.09              | 3.14   | 4.84   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -24.12 | -25.30            | -25.30 | -28.01 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -23.78 | -24.94            | -24.93 | -27.60 |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -24.12 | -25.30            | -25.30 | -28.01 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 151.46 | 306.03            | 308.23 | 399.36 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 151.46 | 306.03            | 308.23 | 399.36 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 83.35  | 169.13            | 170.35 | 220.86 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.13  | -0.13             | -0.13  | -0.15  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.37  | -0.39             | -0.39  | -0.43  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.44  | -2.56             | -2.56  | -2.83  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.24  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.61  | 59.11             | 59.53  | 76.98  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.27  | 59.79             | 60.21  | 77.74  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.87  | -10.04            | -10.03 | -10.98 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -9.87  | -10.04            | -10.03 | -10.98 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -9.87  | -10.04            | -10.03 | -10.98 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -2.52  | -2.64             | -2.64  | -2.93  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.12  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -5.12  | -4.51             | -4.50  | -4.64  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -43.07 | -44.32            | -44.31 | -48.71 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -6.22  | -6.52             | -6.52  | -7.22  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.73  | 33.07             | 33.30  | 43.00  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -8.22  | -8.62             | -8.62  | -9.54  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.49  | -0.51             | -0.51  | -0.57  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.30  | -0.31             | -0.31  | -0.35  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.94  | 28.42             | 28.64  | 37.58  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.94  | 28.42             | 28.64  | 37.58  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 12.94  | 28.42             | 28.64  | 37.58  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.46  | -0.48             | -0.48  | -0.53  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.75  | -1.83             | -1.83  | -2.03  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.94  | -3.09             | -3.09  | -3.42  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.94  | -3.09             | -3.09  | -3.42  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.94  | -3.09             | -3.09  | -3.42  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -10.18 | -10.68            | -10.68 | -11.82 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -21.13 | -22.16            | -22.16 | -24.53 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.51 | -21.52            | -21.51 | -23.82 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.93  | -3.30             | -3.29  | -3.31  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.40   | 52.10             | 52.87  | 78.52  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.40   | 52.10             | 52.87  | 78.52  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.37   | 51.02             | 51.78  | 77.33  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.58  | -1.66             | -1.66  | -1.83  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.80  | -0.83             | -0.83  | -0.92  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.58  | -1.66             | -1.66  | -1.83  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.57  | -1.65             | -1.65  | -1.82  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -18.75 | -19.55            | -19.55 | -21.59 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -18.94 | -19.75            | -19.75 | -21.82 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -18.11 | -18.88            | -18.87 | -20.85 |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -12.32 | -12.55            | -12.55 | -13.75 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.46  | -2.58             | -2.58  | -2.86  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -2.11  | -2.21             | -2.21  | -2.45  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -7.61  | -7.98             | -7.98  | -8.83  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -23.84 | -25.00            | -25.00 | -27.68 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -23.82 | -24.98            | -24.98 | -27.65 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -21.90 | -22.97            | -22.97 | -25.43 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -21.71 | -22.77            | -22.77 | -25.21 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.38  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.12  | -4.12             | -4.12  | -4.48  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -16.87 | -17.70            | -17.69 | -19.59 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -16.87 | -17.70            | -17.69 | -19.59 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -15.22 | -15.97            | -15.97 | -17.68 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.57  | -0.59             | -0.59  | -0.65  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.56  | -0.58             | -0.58  | -0.64  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -5.53  | -5.80             | -5.80  | -6.42  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.57  | -7.94             | -7.94  | -8.79  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -59.66 | -62.03            | -62.01 | -68.44 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -60.89 | -63.33            | -63.31 | -69.87 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.17 | -10.66            | -10.66 | -11.80 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -8.81  | -9.24             | -9.24  | -10.23 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.09   | 21.00             | 21.30  | 31.43  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.71  | 15.33             | 15.64  | 25.32  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.71  | 15.33             | 15.64  | 25.32  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.56  | -1.29             | -1.22  | 0.44   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.66   | 6.28              | 6.35   | 8.82   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -35.89 | -33.07            | -32.99 | -34.72 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -35.04 | -32.18            | -32.11 | -33.74 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -35.04 | -32.18            | -32.11 | -33.74 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.10  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.34  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.38  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.10  | -0.10             | -0.10  | -0.11  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.05  | -1.10             | -1.10  | -1.22  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 21.75  | 43.10             | 43.40  | 56.06  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.55   | 7.17              | 7.22   | 9.36   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.65   | 6.32              | 6.38   | 8.88   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.81   | 9.62              | 9.69   | 12.54  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.98  | -2.08             | -2.08  | -2.30  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.91  | -2.00             | -2.00  | -2.22  |



**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.35  | -2.46             | -2.46  | -2.73  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -3.07  | -3.22             | -3.22  | -3.56  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.51   | 1.10              | 1.11   | 1.45   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.31   | 0.89              | 0.90   | 1.22   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.35  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.51  | -5.78             | -5.78  | -6.40  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.94  | -0.98             | -0.98  | -1.09  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.65  | -3.83             | -3.83  | -4.24  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.69  | -1.77             | -1.77  | -1.96  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -3.72  | -3.91             | -3.90  | -4.32  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.23  | -0.24             | -0.24  | -0.27  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.32  | -0.33             | -0.33  | -0.37  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -4.33  | -4.50             | -4.50  | -4.96  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -7.51  | -7.87             | -7.87  | -8.72  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.38  | -0.40             | -0.40  | -0.45  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.41   | 6.75              | 6.79   | 8.77   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -13.56 | -14.22            | -14.22 | -15.74 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -13.56 | -14.22            | -14.22 | -15.74 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -2.64  | -2.35             | -2.34  | -2.43  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.40  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.51  | -0.54             | -0.54  | -0.60  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.63  | -10.10            | -10.10 | -11.18 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.64  | -6.97             | -6.96  | -7.71  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.12              | 0.13   | 0.18   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.11              | 0.11   | 0.16   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.93  | -0.97             | -0.97  | -1.08  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -7.82  | -8.20             | -8.20  | -9.08  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.34  | -7.70             | -7.69  | -8.52  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -10.27 | -10.77            | -10.77 | -11.92 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -9.07  | -9.52             | -9.51  | -10.53 |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.88  | -1.97             | -1.97  | -2.18  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.13  | -0.13             | -0.13  | -0.15  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 114.27 | 267.83            | 270.05 | 357.41 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 114.29 | 267.85            | 270.07 | 357.43 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.42  | -0.44             | -0.44  | -0.48  |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 15.14  | 31.43             | 31.66  | 41.19  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 13.78  | 30.00             | 30.23  | 39.61  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.70  | -1.78             | -1.78  | -1.97  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -2.06  | -2.16             | -2.16  | -2.39  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -2.06  | -2.16             | -2.16  | -2.39  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.06  | -2.16             | -2.16  | -2.39  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.57   | 7.19              | 7.24   | 9.38   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.75  | -0.79             | -0.79  | -0.87  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -20.28 | -21.27            | -21.27 | -23.55 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -15.65 | -16.42            | -16.41 | -18.17 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -3.70  | -3.88             | -3.88  | -4.29  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.83  | -0.87             | -0.87  | -0.97  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.44  | -0.46             | -0.46  | -0.51  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.57  | -1.65             | -1.65  | -1.83  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.57  | -1.64             | -1.64  | -1.82  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.57  | -1.64             | -1.64  | -1.82  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.13              | 0.13   | 0.16   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.42  | -0.44             | -0.44  | -0.49  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.21  | -1.27             | -1.27  | -1.40  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.52  | -0.54             | -0.54  | -0.60  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.92  | -0.96             | -0.96  | -1.06  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.99  | -1.03             | -1.03  | -1.14  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.99  | -1.03             | -1.03  | -1.14  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.38  | -0.40             | -0.40  | -0.45  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.67  | -5.94             | -5.94  | -6.58  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -15.01 | -15.74            | -15.74 | -17.43 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.15  | -1.21             | -1.21  | -1.34  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.18   | 6.78              | 6.84   | 8.93   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.18   | 6.78              | 6.84   | 8.93   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.22  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.07  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.73  | -0.76             | -0.76  | -0.85  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.73  | -0.76             | -0.76  | -0.85  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.77  | -0.81             | -0.81  | -0.89  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.05 | -10.54            | -10.54 | -11.67 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -6.11  | -6.41             | -6.41  | -7.09  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.98  | -8.37             | -8.37  | -9.27  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.98  | -8.37             | -8.37  | -9.27  |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.78  | -1.86             | -1.86  | -2.06  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.55  | -0.58             | -0.58  | -0.64  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -2.18  | -2.29             | -2.29  | -2.53  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.54  | 40.79             | 41.09  | 53.50  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.29  | -0.30             | -0.30  | -0.33  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.74  | 42.03             | 42.34  | 54.88  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.07  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.15  | -0.15             | -0.15  | -0.17  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -4.18  | -4.39             | -4.39  | -4.86  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -4.18  | -4.39             | -4.39  | -4.86  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.18  | -4.39             | -4.39  | -4.86  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.18  | -4.39             | -4.39  | -4.86  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.91  | -2.00             | -2.00  | -2.22  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.17  | -5.43             | -5.43  | -6.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -12.28 | -12.52            | -12.51 | -13.71 |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -12.40 | -12.64            | -12.64 | -13.84 |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.30  | -0.31             | -0.31  | -0.34  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 30.26  | 59.78             | 60.20  | 77.72  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 31.53  | 63.42             | 63.87  | 82.70  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.09              | 0.09   | 0.12   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.09              | 0.09   | 0.12   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 54.88  | 109.57            | 110.35 | 142.71 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.74  | -0.78             | -0.78  | -0.86  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.63  | -0.66             | -0.66  | -0.73  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.36  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -18.71 | 75.44             | 76.88  | 122.66 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 95.27  | 194.90            | 196.32 | 254.86 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 95.27  | 194.90            | 196.32 | 254.86 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -18.82 | 75.32             | 76.75  | 122.52 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | -18.81 | 75.33             | 76.76  | 122.53 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -18.79 | 75.35             | 76.79  | 122.56 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -18.80 | 75.34             | 76.77  | 122.54 |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -18.71 | 75.44             | 76.88  | 122.66 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.06 | -10.49            | -10.49 | -11.59 |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -9.71  | -10.12            | -10.12 | -11.18 |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.86  | -0.90             | -0.90  | -1.00  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 27.80  | 57.22             | 57.64  | 74.89  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.92  | -2.01             | -2.01  | -2.22  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.92  | -2.01             | -2.01  | -2.22  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 27.52  | 54.67             | 55.06  | 71.15  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.66  | -0.69             | -0.69  | -0.76  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.97  | -1.02             | -1.02  | -1.13  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -29.05 | -30.47            | -30.47 | -33.73 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.52  | -3.69             | -3.69  | -4.08  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.93  | -0.98             | -0.98  | -1.08  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.36  | -0.38             | -0.38  | -0.42  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 18.97  | 37.57             | 37.84  | 48.87  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.38  | -3.54             | -3.54  | -3.92  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.29  | -0.30             | -0.30  | -0.33  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.84  | -0.88             | -0.88  | -0.97  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.55   | 13.61             | 13.76  | 19.14  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.45   | 12.45             | 12.60  | 17.86  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.95   | 10.88             | 11.03  | 16.12  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -12.88 | -13.10            | -13.09 | -14.33 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -9.31  | -9.53             | -9.52  | -10.44 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.42  | 43.51             | 44.00  | 61.58  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.51   | 5.63              | 5.67   | 7.46   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.54   | 5.66              | 5.71   | 7.50   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.38  | -1.42             | -1.42  | -1.56  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.82  | -0.86             | -0.86  | -0.96  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.26  | -0.27             | -0.27  | -0.30  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |         |                   |         |         |
|---|-------------------------------------|--|---|--|---------|-------------------|---------|---------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2  | Alt.3 – Preferred | Alt. 4  | Alt. 5  |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.27   | -0.20             | -0.20   | -0.19   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.36   | -1.43             | -1.42   | -1.58   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01   | -0.01             | -0.01   | -0.02   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09   | -0.09             | -0.09   | -0.10   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.17   | -0.18             | -0.18   | -0.20   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.49   | -1.56             | -1.56   | -1.73   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08   | -0.08             | -0.08   | -0.09   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.64   | -0.67             | -0.67   | -0.74   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -14.87  | -15.60            | -15.59  | -17.26  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03   | -0.03             | -0.03   | -0.03   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -1.09   | -1.14             | -1.14   | -1.27   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.09   | -1.14             | -1.14   | -1.26   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15   | -0.15             | -0.15   | -0.17   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -6.91   | -7.25             | -7.25   | -8.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07    | 0.17              | 0.17    | 0.23    |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -4.49   | -4.71             | -4.71   | -5.21   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -110.35 | -100.20           | -99.95  | -104.51 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -56.86  | -46.74            | -46.53  | -46.42  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -110.85 | -100.73           | -100.48 | -105.10 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -110.57 | -100.44           | -100.19 | -104.78 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |         |                   |        |         |
|--|-------------------------------------|--|---|--|---------|-------------------|--------|---------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2  | Alt.3 – Preferred | Alt. 4 | Alt. 5  |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -110.35 | -100.20           | -99.95 | -104.51 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.45   | -0.48             | -0.48  | -0.53   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.39   | -0.41             | -0.41  | -0.45   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -12.97  | -13.60            | -13.60 | -15.06  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01   | -0.01             | -0.01  | -0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.43   | -0.45             | -0.45  | -0.50   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.43   | -0.45             | -0.45  | -0.50   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20   | -0.21             | -0.21  | -0.23   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.81   | -0.85             | -0.85  | -0.94   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.58   | -1.66             | -1.66  | -1.83   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.78   | -0.82             | -0.82  | -0.91   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00    | 0.00              | 0.00   | 0.00    |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.33   | -0.35             | -0.35  | -0.38   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00    | 0.00              | 0.00   | 0.00    |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01   | -0.01             | -0.01  | -0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.65   | -0.68             | -0.68  | -0.76   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.75    | 4.37              | 4.41   | 5.88    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 21.26   | 48.89             | 49.29  | 65.07   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 62.34   | 154.67            | 156.01 | 207.97  |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 62.34  | 154.67            | 156.01 | 207.97 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 41.28  | 132.57            | 133.91 | 183.52 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 44.91  | 136.39            | 137.73 | 187.74 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -27.75 | -29.11            | -29.11 | -32.22 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -29.16 | -30.59            | -30.59 | -33.86 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -29.14 | -30.57            | -30.56 | -33.84 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.59              | 0.60   | 0.77   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.55  | -0.58             | -0.58  | -0.64  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.34  | -3.50             | -3.50  | -3.87  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.26  | -1.26             | -1.26  | -1.36  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -13.89 | -12.95            | -12.92 | -13.66 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -13.89 | -12.95            | -12.92 | -13.66 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -12.49 | -11.48            | -11.45 | -12.03 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -12.49 | -11.48            | -11.45 | -12.03 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.29  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -9.28  | -9.69             | -9.69  | -10.71 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -5.79  | -6.04             | -6.03  | -6.67  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -7.80  | -8.18             | -8.18  | -9.06  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.77  | -0.80             | -0.80  | -0.89  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -7.61  | -7.96             | -7.96  | -8.81  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.11  | 0.29              | 0.29   | 0.49   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -2.73  | -2.46             | -2.45  | -2.55  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -11.00 | -11.54            | -11.54 | -12.77 |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -18.61 | -19.52            | -19.52 | -21.61 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -3.47  | -3.64             | -3.64  | -4.03  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -3.47  | -3.64             | -3.64  | -4.03  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -3.47  | -3.64             | -3.64  | -4.03  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -2.52  | -2.65             | -2.65  | -2.93  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.39  | -0.41             | -0.41  | -0.45  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -7.84  | -5.12             | -5.08  | -4.39  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -3.41  | -3.57             | -3.57  | -3.96  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -3.41  | -3.57             | -3.57  | -3.96  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -3.98  | -4.18             | -4.18  | -4.62  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | -18.22 | 75.95             | 77.38  | 123.22 |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -10.20 | -10.70            | -10.70 | -11.84 |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.44  | -2.55             | -2.55  | -2.83  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.81  | -0.85             | -0.85  | -0.94  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.26  | -0.27             | -0.27  | -0.30  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.74              | 0.75   | 1.01   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -10.18 | -10.68            | -10.68 | -11.82 |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -9.84  | -10.32            | -10.32 | -11.42 |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -8.57  | 0.59              | 0.73   | 4.60   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -8.57  | 0.59              | 0.73   | 4.59   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.34  | 0.83              | 0.98   | 4.86   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -2.05  | -2.15             | -2.15  | -2.38  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.93   | 20.67             | 20.82  | 27.10  |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.36  | 10.98             | 11.16  | 16.84  |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.62   | 14.05             | 14.20  | 19.77  |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.62   | 14.05             | 14.20  | 19.77  |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -4.21  | -4.42             | -4.42  | -4.89  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -26.65 | -27.95            | -27.95 | -30.94 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -26.69 | -27.99            | -27.99 | -30.98 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -26.68 | -27.98            | -27.98 | -30.97 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 67.68  | 182.10            | 183.77 | 247.33 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 67.95  | 182.39            | 184.06 | 247.65 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 67.68  | 182.10            | 183.77 | 247.33 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 72.20  | 186.85            | 188.51 | 252.58 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -31.23 | -29.12            | -29.06 | -30.73 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -31.23 | -29.12            | -29.06 | -30.73 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -31.23 | -29.12            | -29.06 | -30.73 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -31.23 | -29.11            | -29.05 | -30.73 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -31.23 | -29.11            | -29.05 | -30.73 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 1.23              | 1.24   | 1.61   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.08             | -0.08  | -0.09  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.39  | -0.41             | -0.41  | -0.45  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -7.28  | -7.64             | -7.64  | -8.45  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.03  | -2.13             | -2.13  | -2.35  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -21.54 | -22.31            | -22.30 | -24.57 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.16  | -3.03             | -3.03  | -3.24  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.00  | -1.05             | -1.05  | -1.16  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -1.00  | -1.05             | -1.05  | -1.16  |

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.24  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.34  | -0.36             | -0.36  | -0.40  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.34  | -0.36             | -0.35  | -0.39  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.94  | -4.14             | -4.14  | -4.58  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.11  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -2.25  | -2.36             | -2.36  | -2.61  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -2.32  | -2.43             | -2.43  | -2.69  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -8.43  | -8.84             | -8.84  | -9.79  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.37  | -1.44             | -1.44  | -1.60  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 50.12  | 99.15             | 99.84  | 128.93 |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -6.75  | -7.08             | -7.08  | -7.84  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 4.97   | 31.04             | 31.43  | 45.00  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 5.15   | 31.23             | 31.62  | 45.21  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 5.15   | 31.23             | 31.62  | 45.21  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.70  | -1.78             | -1.78  | -1.97  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.55  | -0.58             | -0.58  | -0.64  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.86  | -0.81             | -0.80  | -0.85  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.86  | -0.81             | -0.80  | -0.85  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.86  | -0.81             | -0.80  | -0.85  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.70  | -2.75             | -2.75  | -3.01  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.01             | -0.01  | 0.01   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.30  | -4.50             | -4.50  | -4.97  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.18  | -0.18             | -0.18  | -0.20  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.17  | 0.66              | 0.68   | 1.08   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.64   | 1.51              | 1.52   | 2.01   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.78  | -0.81             | -0.81  | -0.90  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.57  | -0.60             | -0.60  | -0.66  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.54  | 53.80             | 54.22  | 71.11  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.71  | -0.75             | -0.75  | -0.83  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -6.74  | -7.07             | -7.07  | -7.83  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.38  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.20  | -0.15             | -0.15  | -0.14  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.73  | -2.46             | -2.45  | -2.55  |



**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.14  | -2.24             | -2.24  | -2.48  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 96.69  | 196.40            | 197.82 | 256.51 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -5.83  | -6.10             | -6.10  | -6.75  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | 0.66              | 0.68   | 1.08   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.44  | -0.46             | -0.46  | -0.51  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.67   | 13.19             | 13.29  | 17.16  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.58   | 13.12             | 13.22  | 17.09  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.56   | 13.10             | 13.20  | 17.07  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -5.23  | -5.48             | -5.48  | -6.07  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -38.56 | -40.44            | -40.44 | -44.76 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -38.49 | -40.37            | -40.36 | -44.68 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -37.89 | -39.74            | -39.74 | -43.99 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -2.50  | -2.62             | -2.62  | -2.90  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.79  | -0.83             | -0.83  | -0.92  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.03   | 8.77              | 8.84   | 11.57  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.70  | -0.74             | -0.74  | -0.82  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.22  | 35.74             | 36.00  | 46.84  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 17.22  | 35.74             | 36.00  | 46.84  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-40. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.93  | -3.07             | -3.07  | -3.40  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.92  | -2.02             | -2.02  | -2.23  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.41  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.91  | -0.96             | -0.96  | -1.06  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -3.80  | -3.99             | -3.99  | -4.42  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -2.93  | -3.07             | -3.07  | -3.40  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -7.30  | -7.65             | -7.65  | -8.47  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.52  | -1.59             | -1.59  | -1.76  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -1.29  | -1.35             | -1.35  | -1.49  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.01   | 0.02              | 0.03   | 0.04   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-41. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.05   | 8.64              | 8.63   | 11.23  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.12   | 7.31              | 7.31   | 9.51   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.51   | 3.58              | 3.58   | 4.65   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.89   | 1.27              | 1.27   | 1.66   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.53   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.23   | 3.18              | 3.18   | 4.14   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.77   | 3.96              | 3.96   | 5.15   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.77   | 3.96              | 3.96   | 5.15   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.42   | 0.60              | 0.60   | 0.79   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.02   | 1.45              | 1.45   | 1.89   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.08  | 17.30             | 17.41  | 22.69  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 1.15              | 1.15   | 1.49   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.45   | 3.50              | 3.50   | 4.55   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.49   | 3.56              | 3.56   | 4.63   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 27.07  | 38.64             | 38.63  | 50.24  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.69  | 35.26             | 35.25  | 45.83  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 27.09  | 38.68             | 38.66  | 50.28  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.23   | 3.23              | 3.31   | 4.34   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.02  | 17.17             | 17.16  | 22.32  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.84  | 16.91             | 16.90  | 21.98  |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.02  | 17.17             | 17.16  | 22.32  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.68   | 5.26              | 5.26   | 6.85   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.68   | 5.26              | 5.26   | 6.85   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.90   | 4.23              | 4.41   | 5.82   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.22   | 1.74              | 1.74   | 2.26   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.48              | 0.48   | 0.63   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.09   | 7.27              | 7.27   | 9.45   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.10   | 7.28              | 7.28   | 9.47   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.10   | 7.28              | 7.28   | 9.47   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 2.95   | 4.21              | 4.21   | 5.47   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 21.90  | 31.27             | 31.26  | 40.65  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 3.10   | 4.42              | 4.42   | 5.75   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.10   | 5.85              | 5.85   | 7.61   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.24   | 0.35              | 0.35   | 0.45   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.27   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.42   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.87   | 1.24              | 1.24   | 1.62   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.73   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.73   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.73   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.07   | 7.25              | 7.24   | 9.42   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.48  | 14.96             | 14.96  | 19.45  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.15  | 14.49             | 14.49  | 18.84  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.41   | 3.43              | 3.43   | 4.46   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 26.54  | 37.89             | 37.89  | 49.28  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 26.54  | 37.89             | 37.89  | 49.28  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.05  | 38.62             | 38.62  | 50.22  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.64   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.44   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.40   | 13.43             | 13.42  | 17.45  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.51   | 13.58             | 13.57  | 17.65  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.09   | 12.98             | 12.98  | 16.88  |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 6.31   | 9.01              | 9.01   | 11.71  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.23   | 1.75              | 1.75   | 2.28   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.05   | 1.50              | 1.50   | 1.95   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.78   | 5.40              | 5.40   | 7.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 11.87  | 16.95             | 16.95  | 22.04  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.86  | 16.94             | 16.93  | 22.02  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.92  | 15.60             | 15.59  | 20.28  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.82  | 15.44             | 15.44  | 20.07  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.31   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.15   | 3.07              | 3.07   | 3.99   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.41   | 12.01             | 12.01  | 15.61  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.41   | 12.01             | 12.01  | 15.61  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.59   | 10.84             | 10.84  | 14.09  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.91   | 4.15              | 4.15   | 5.39   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.77   | 5.38              | 5.38   | 6.99   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 30.04  | 42.89             | 42.88  | 55.75  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 30.65  | 43.77             | 43.76  | 56.90  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.07   | 7.24              | 7.24   | 9.41   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.39   | 6.27              | 6.27   | 8.15   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 10.21  | 14.60             | 14.63  | 19.03  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.33  | 19.05             | 19.08  | 24.82  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.33  | 19.05             | 19.08  | 24.82  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.47   | 10.84             | 11.19  | 14.71  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.08   | 3.13              | 3.49   | 4.69   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.27  | 30.53             | 30.88  | 40.31  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.85  | 29.94             | 30.28  | 39.53  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 20.85  | 29.94             | 30.28  | 39.53  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.44   | 0.63              | 0.63   | 0.82   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.35   | 0.54              | 0.62   | 0.84   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.75   | 2.50              | 2.51   | 3.26   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.15              | 0.16   | 0.21   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.99   | 1.41              | 1.41   | 1.83   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.90   | 1.29              | 1.29   | 1.67   |



**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.17   | 1.67              | 1.67   | 2.17   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 1.49   | 2.13              | 2.13   | 2.77   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.75   | 3.92              | 3.92   | 5.10   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.48   | 0.68              | 0.68   | 0.89   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.82   | 2.60              | 2.60   | 3.38   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.84   | 1.20              | 1.20   | 1.56   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 1.86   | 2.65              | 2.65   | 3.45   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.14   | 0.18   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.23   | 3.18              | 3.18   | 4.14   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.74   | 5.34              | 5.34   | 6.94   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 6.78   | 9.68              | 9.68   | 12.59  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 6.78   | 9.68              | 9.67   | 12.58  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.54   | 2.20              | 2.20   | 2.86   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.26   | 0.37              | 0.37   | 0.47   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.80   | 6.86              | 6.86   | 8.91   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.31   | 4.73              | 4.73   | 6.15   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.46   | 0.66              | 0.66   | 0.85   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.90   | 5.57              | 5.57   | 7.24   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.66   | 5.22              | 5.22   | 6.79   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.12   | 7.31              | 7.31   | 9.50   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.51   | 6.44              | 6.43   | 8.37   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 22.90  | 32.75             | 32.84  | 42.75  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.89  | 32.73             | 32.82  | 42.72  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.82   | 1.17              | 1.17   | 1.52   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.50   | 2.14              | 2.14   | 2.79   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.83   | 1.19              | 1.19   | 1.55   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.03   | 1.47              | 1.47   | 1.91   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.03   | 1.47              | 1.47   | 1.91   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.02   | 1.45              | 1.45   | 1.89   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.53              | 0.62   | 0.84   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.11  | 14.44             | 14.44  | 18.77  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 7.80   | 11.14             | 11.14  | 14.48  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.95   | 2.78              | 2.78   | 3.62   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.42   | 0.59              | 0.59   | 0.77   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.40   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 1.06              | 1.06   | 1.38   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.78   | 1.12              | 1.12   | 1.46   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.78   | 1.12              | 1.12   | 1.46   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.60   | 0.86              | 0.86   | 1.12   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.46   | 0.65              | 0.65   | 0.85   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.83   | 4.03              | 4.03   | 5.24   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.48   | 10.69             | 10.68  | 13.89  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.58   | 0.82              | 0.82   | 1.07   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 0.88              | 0.97   | 1.30   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.88              | 0.97   | 1.30   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.14   | 0.18   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.26   | 0.38              | 0.38   | 0.49   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.01   | 7.15              | 7.15   | 9.30   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.04   | 4.34              | 4.34   | 5.65   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.98   | 5.68              | 5.68   | 7.39   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.98   | 5.68              | 5.68   | 7.39   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.89   | 1.26              | 1.26   | 1.64   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.09   | 1.55              | 1.55   | 2.02   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.28   | 1.82              | 1.82   | 2.37   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.22   | 0.29   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.71   | 1.02              | 1.02   | 1.32   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.14   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.09   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.09   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.09   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.09   | 2.98              | 2.98   | 3.87   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.29              | 1.29   | 1.67   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.58   | 3.68              | 3.68   | 4.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.29   | 8.99              | 8.98   | 11.68  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.37   | 9.10              | 9.09   | 11.83  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.87              | 0.88   | 1.15   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.64   | 0.91              | 0.92   | 1.20   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.68   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.55   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 61.31  | 87.74             | 88.16  | 114.83 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.90   | 7.20              | 7.64   | 10.13  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.90   | 7.20              | 7.64   | 10.13  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 61.36  | 87.81             | 88.23  | 114.92 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 61.35  | 87.80             | 88.22  | 114.90 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 61.34  | 87.79             | 88.20  | 114.89 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 61.35  | 87.80             | 88.21  | 114.90 |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 61.31  | 87.74             | 88.16  | 114.83 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.05   | 7.21              | 7.21   | 9.37   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.87   | 6.95              | 6.95   | 9.04   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.35   | 1.93              | 1.95   | 2.54   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.36              | 1.36   | 1.77   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.96   | 1.36              | 1.36   | 1.77   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.51   | 2.41              | 2.92   | 4.02   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 14.50  | 20.70             | 20.70  | 26.91  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.46   | 0.66              | 0.66   | 0.86   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.68   | 2.40              | 2.40   | 3.12   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.27   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.55              | 0.54   | 0.71   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.57   | 5.10              | 5.10   | 6.64   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.12   | 5.88              | 5.89   | 7.66   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.85   | 6.93              | 6.94   | 9.02   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.63   | 9.47              | 9.47   | 12.31  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.77   | 6.81              | 6.81   | 8.86   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.61  | 18.06             | 18.17  | 23.68  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.36   | 0.52              | 0.52   | 0.67   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.79   | 1.13              | 1.13   | 1.46   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.38   | 0.54              | 0.54   | 0.70   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.21              | 0.21   | 0.27   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.22   | 0.29   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.68   | 0.97              | 0.97   | 1.26   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.75   | 1.06              | 1.06   | 1.38   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.41   | 10.58             | 10.58  | 13.76  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 0.84              | 0.84   | 1.10   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.84              | 0.84   | 1.09   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.45   | 4.92              | 4.92   | 6.40   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.24   | 3.20              | 3.20   | 4.16   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 63.34  | 90.44             | 90.42  | 117.57 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 35.19  | 50.24             | 50.22  | 65.31  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 63.59  | 90.79             | 90.77  | 118.03 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 63.39  | 90.52             | 90.49  | 117.67 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 63.34  | 90.44             | 90.42  | 117.57 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.45   | 9.20              | 9.20   | 11.96  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.39   | 0.56              | 0.56   | 0.73   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.75   | 5.36              | 5.38   | 7.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.99  | 24.27             | 24.27  | 31.57  |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.99  | 24.27             | 24.27  | 31.57  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 27.45  | 39.20             | 39.20  | 50.98  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.60  | 36.56             | 36.57  | 47.56  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 13.88  | 19.82             | 19.82  | 25.77  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.56  | 20.79             | 20.79  | 27.03  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.55  | 20.78             | 20.77  | 27.01  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.59   | 2.28              | 2.28   | 2.96   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.44   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 7.80   | 11.13             | 11.13  | 14.47  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.80   | 11.13             | 11.13  | 14.47  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.09   | 10.12             | 10.12  | 13.15  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.09   | 10.12             | 10.12  | 13.15  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.61   | 6.58              | 6.58   | 8.55   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.91   | 4.16              | 4.16   | 5.41   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.89   | 5.55              | 5.55   | 7.22   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.36   | 0.52              | 0.52   | 0.67   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.80   | 5.42              | 5.42   | 7.05   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.58   | 2.25              | 2.25   | 2.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 5.48   | 7.83              | 7.83   | 10.18  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.26   | 13.23             | 13.22  | 17.19  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.31   | 1.87              | 1.87   | 2.43   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 5.58   | 7.96              | 7.96   | 10.35  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.10   | 3.00              | 3.00   | 3.90   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 61.04  | 87.37             | 87.78  | 114.34 |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.08   | 7.26              | 7.26   | 9.43   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.21   | 1.73              | 1.73   | 2.25   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.40   | 0.58              | 0.58   | 0.75   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.35   | 7.63              | 7.63   | 9.92   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.90   | 7.00              | 7.00   | 9.10   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.39   | 13.41             | 13.41  | 17.44  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.40   | 13.42             | 13.42  | 17.45  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.23   | 13.19             | 13.18  | 17.14  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.98   | 1.40              | 1.40   | 1.82   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.63   | 0.89              | 0.89   | 1.16   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.28   | 8.96              | 8.96   | 11.65  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.71   | 5.30              | 5.30   | 6.89   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.71   | 5.30              | 5.30   | 6.89   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 2.43   | 3.47              | 3.47   | 4.51   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 13.27  | 18.95             | 18.95  | 24.64  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.31  | 19.00             | 18.99  | 24.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.29  | 18.97             | 18.97  | 24.66  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 26.01  | 37.14             | 37.14  | 48.30  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.88  | 36.95             | 36.95  | 48.06  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.01  | 37.14             | 37.14  | 48.30  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 23.78  | 33.96             | 33.96  | 44.17  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 17.61  | 25.18             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.61  | 25.18             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.61  | 25.18             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.60  | 25.18             | 25.26  | 32.88  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.60  | 25.18             | 25.26  | 32.88  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.63   | 5.19              | 5.19   | 6.74   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.01   | 1.44              | 1.44   | 1.87   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 10.91  | 15.58             | 15.57  | 20.25  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.77   | 2.53              | 2.53   | 3.28   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.97   | 2.81              | 2.81   | 3.65   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.15   | 1.65              | 1.65   | 2.14   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.19   | 1.70              | 1.69   | 2.20   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.20   | 6.00              | 6.00   | 7.80   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.64   | 0.92              | 0.92   | 1.19   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.21              | 0.24   | 0.32   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.49   | 4.98              | 4.98   | 6.48   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 12.75  | 18.45             | 18.96  | 24.88  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 12.66  | 18.32             | 18.83  | 24.71  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 12.66  | 18.32             | 18.83  | 24.71  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.85   | 1.21              | 1.21   | 1.57   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.71   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.15   | 3.07              | 3.07   | 4.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.58              | 0.58   | 0.75   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.28   | 0.41              | 0.41   | 0.53   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.89   | 4.14              | 4.15   | 5.40   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.35   | 4.78              | 4.78   | 6.22   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.19              | 0.18   | 0.24   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.58   | 2.25              | 2.25   | 2.93   |



**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.07   | 1.53              | 1.53   | 1.98   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.04   | 5.97              | 6.41   | 8.52   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.91   | 4.16              | 4.16   | 5.41   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.61   | 3.72              | 3.72   | 4.84   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.23  | 27.45             | 27.44  | 35.68  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 19.19  | 27.40             | 27.39  | 35.61  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.89  | 26.97             | 26.97  | 35.06  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.30   | 1.85              | 1.85   | 2.41   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.89              | 2.24   | 3.07   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.93   | 1.33              | 1.33   | 1.72   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.93   | 1.33              | 1.33   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-42. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.72   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.89   | 1.27              | 1.27   | 1.65   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.45   | 0.64              | 0.64   | 0.84   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.90   | 2.71              | 2.71   | 3.52   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.71   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.64   | 5.19              | 5.19   | 6.75   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.75   | 1.07              | 1.07   | 1.39   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.65   | 0.93              | 0.93   | 1.21   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.08   | 5.03              | 5.03   | 5.98   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.74  | 24.31             | 24.30  | 28.89  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 16.71  | 20.58             | 20.57  | 24.46  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 8.18   | 10.07             | 10.06  | 11.96  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.91   | 3.59              | 3.58   | 4.26   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.05   | 1.30              | 1.30   | 1.54   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.15   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.27   | 8.95              | 8.95   | 10.64  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.05   | 11.14             | 11.14  | 13.24  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.05   | 11.14             | 11.14  | 13.24  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.74   | 2.14              | 2.14   | 2.55   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.71   | 2.10              | 2.10   | 2.50   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.35   | 1.67              | 1.67   | 1.98   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.87   | 1.07              | 1.07   | 1.27   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.32   | 4.09              | 4.09   | 4.86   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 39.22  | 48.85             | 48.91  | 58.33  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.62   | 3.23              | 3.23   | 3.84   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.84   | 1.04              | 1.04   | 1.23   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.00   | 9.85              | 9.85   | 11.71  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.14   | 10.02             | 10.01  | 11.91  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 88.30  | 108.73            | 108.69 | 129.23 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 80.57  | 99.21             | 99.17  | 117.91 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 88.37  | 108.82            | 108.78 | 129.33 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.70   | 0.87              | 0.87   | 1.03   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.18   | 9.25              | 9.29   | 11.19  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 39.24  | 48.31             | 48.30  | 57.42  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 38.65  | 47.60             | 47.58  | 56.57  |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts Formaldehyde 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 39.24  | 48.31             | 48.30  | 57.42  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 11.99  | 14.80             | 14.80  | 17.61  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.99  | 14.80             | 14.80  | 17.61  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 9.16   | 12.18             | 12.30  | 14.93  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.74              | 0.74   | 0.88   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.97   | 4.89              | 4.89   | 5.81   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.08   | 1.33              | 1.33   | 1.59   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.61  | 20.45             | 20.44  | 24.31  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.63  | 20.48             | 20.47  | 24.34  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.63  | 20.48             | 20.47  | 24.34  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.08   | 5.03              | 5.03   | 5.98   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 9.71   | 11.95             | 11.95  | 14.20  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 71.50  | 88.05             | 88.02  | 104.64 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 10.11  | 12.44             | 12.44  | 14.79  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13.37  | 16.46             | 16.46  | 19.57  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 0.98              | 0.98   | 1.16   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.59              | 0.59   | 0.70   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.40   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.40   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.40   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.74   | 0.92              | 0.92   | 1.09   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.84   | 3.50              | 3.50   | 4.16   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.79   | 5.90              | 5.90   | 7.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.79   | 5.90              | 5.90   | 7.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.79   | 5.90              | 5.90   | 7.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.56  | 20.39             | 20.38  | 24.23  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 34.28  | 42.21             | 42.20  | 50.17  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 33.24  | 40.93             | 40.92  | 48.65  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.85   | 9.66              | 9.66   | 11.48  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 86.61  | 106.70            | 106.67 | 126.84 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 86.61  | 106.70            | 106.67 | 126.84 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 88.28  | 108.75            | 108.72 | 129.28 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.57   | 3.16              | 3.16   | 3.76   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.19   | 1.46              | 1.46   | 1.74   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.57   | 3.16              | 3.16   | 3.76   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.72   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.69  | 37.79             | 37.78  | 44.91  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.02  | 38.20             | 38.18  | 45.40  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 29.66  | 36.52             | 36.51  | 43.41  |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 20.63  | 25.41             | 25.40  | 30.19  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.00   | 4.93              | 4.93   | 5.86   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.43   | 4.22              | 4.22   | 5.02   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.35  | 15.21             | 15.20  | 18.08  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 38.75  | 47.72             | 47.70  | 56.71  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 38.72  | 47.67             | 47.66  | 56.66  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 35.64  | 43.88             | 43.86  | 52.15  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 35.30  | 43.47             | 43.45  | 51.66  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.04   | 8.67              | 8.67   | 10.31  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 27.44  | 33.79             | 33.78  | 40.16  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.44  | 33.79             | 33.78  | 40.16  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 24.77  | 30.50             | 30.49  | 36.25  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.93   | 1.15              | 1.15   | 1.36   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.05   | 1.29              | 1.29   | 1.53   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.31   | 11.46             | 11.46  | 13.63  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.30  | 15.14             | 15.14  | 18.00  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 98.00  | 120.67            | 120.63 | 143.42 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 100.01 | 123.15            | 123.10 | 146.36 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.54  | 20.36             | 20.36  | 24.20  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 14.33  | 17.64             | 17.64  | 20.97  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 33.29  | 41.15             | 41.15  | 48.98  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.46  | 53.68             | 53.68  | 63.87  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.46  | 53.68             | 53.68  | 63.87  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.40  | 29.28             | 29.49  | 35.64  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.69   | 9.94              | 10.15  | 12.65  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 68.85  | 86.48             | 86.67  | 103.62 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 67.48  | 84.80             | 84.98  | 101.61 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 67.48  | 84.80             | 84.98  | 101.61 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.65   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.60              | 0.60   | 0.71   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.55   | 1.91              | 1.91   | 2.27   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.94   | 1.56              | 1.61   | 2.06   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.56   | 6.88              | 6.88   | 8.19   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.30   | 0.40              | 0.40   | 0.49   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.22   | 3.97              | 3.97   | 4.72   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.01   | 3.71              | 3.71   | 4.41   |



**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.82   | 4.71              | 4.70   | 5.59   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 4.90   | 6.03              | 6.03   | 7.17   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 8.96   | 11.03             | 11.03  | 13.11  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.54   | 1.90              | 1.90   | 2.26   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.94   | 7.32              | 7.32   | 8.70   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 2.74   | 3.38              | 3.38   | 4.02   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 6.06   | 7.46              | 7.46   | 8.86   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.34   | 0.42              | 0.41   | 0.49   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 7.20   | 8.87              | 8.86   | 10.54  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 12.20  | 15.03             | 15.02  | 17.86  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 22.10  | 27.21             | 27.20  | 32.34  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 22.09  | 27.20             | 27.19  | 32.33  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.02   | 6.19              | 6.18   | 7.35   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.83   | 1.03              | 1.03   | 1.22   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.67  | 19.30             | 19.29  | 22.93  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.80  | 13.30             | 13.30  | 15.81  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.50   | 1.85              | 1.85   | 2.20   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.72  | 15.67             | 15.66  | 18.62  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.94  | 14.70             | 14.69  | 17.47  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.70  | 20.57             | 20.56  | 24.45  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.73  | 18.14             | 18.13  | 21.56  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.06   | 3.76              | 3.76   | 4.47   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.29   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 74.57  | 92.30             | 92.33  | 109.93 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 74.53  | 92.25             | 92.28  | 109.88 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68   | 0.84              | 0.84   | 0.99   |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.67   | 3.28              | 3.28   | 3.90   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 4.89   | 6.03              | 6.02   | 7.16   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.72   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.74   | 3.38              | 3.38   | 4.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.35   | 4.12              | 4.12   | 4.90   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.35   | 4.12              | 4.12   | 4.90   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 3.33   | 4.10              | 4.10   | 4.88   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.92   | 1.54              | 1.59   | 2.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 33.00  | 40.63             | 40.61  | 48.29  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 25.46  | 31.35             | 31.34  | 37.26  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.21   | 7.64              | 7.64   | 9.08   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.35   | 1.67              | 1.67   | 1.98   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.70   | 0.87              | 0.87   | 1.03   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.49   | 3.06              | 3.06   | 3.64   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 2.56   | 3.15              | 3.15   | 3.74   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 2.56   | 3.15              | 3.15   | 3.74   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.68   | 0.84              | 0.84   | 1.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.97   | 2.42              | 2.42   | 2.88   |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 0.98              | 0.98   | 1.16   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.49   | 1.84              | 1.83   | 2.18   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.62   | 1.99              | 1.99   | 2.37   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.62   | 1.99              | 1.99   | 2.37   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.22   | 11.35             | 11.35  | 13.49  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.42  | 30.07             | 30.06  | 35.74  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 1.88   | 2.31              | 2.31   | 2.75   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 2.43              | 2.48   | 3.08   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.64   | 2.43              | 2.48   | 3.08   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.97   | 1.20              | 1.20   | 1.43   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.42   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.05   | 1.30              | 1.29   | 1.54   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.35  | 20.13             | 20.12  | 23.92  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.93   | 12.23             | 12.22  | 14.53  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.99  | 15.99             | 15.98  | 19.00  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.99  | 15.99             | 15.98  | 19.00  |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.89   | 3.56              | 3.56   | 4.23   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.92   | 1.14              | 1.14   | 1.35   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.55   | 4.37              | 4.37   | 5.20   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.02   | 4.95              | 4.94   | 5.88   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.13   | 2.63              | 2.63   | 3.12   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.48   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 6.80   | 8.38              | 8.38   | 9.96   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.80   | 8.38              | 8.38   | 9.96   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.80   | 8.38              | 8.38   | 9.96   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.80   | 8.38              | 8.38   | 9.96   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.01   | 3.71              | 3.71   | 4.41   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.42   | 10.36             | 10.36  | 12.32  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 20.58  | 25.34             | 25.33  | 30.11  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 20.81  | 25.62             | 25.61  | 30.45  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.00   | 2.51              | 2.52   | 3.01   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.07   | 2.57              | 2.58   | 3.07   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.20   | 1.48              | 1.48   | 1.76   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.00   | 1.23              | 1.23   | 1.46   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 199.82 | 248.16            | 248.33 | 295.96 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 15.06  | 20.64             | 20.90  | 25.57  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 15.06  | 20.64             | 20.90  | 25.57  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 199.99 | 248.37            | 248.55 | 296.21 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 199.98 | 248.35            | 248.52 | 296.19 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 199.94 | 248.30            | 248.48 | 296.14 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 199.97 | 248.33            | 248.51 | 296.17 |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 199.82 | 248.16            | 248.33 | 295.96 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.47  | 20.28             | 20.27  | 24.10  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.89  | 19.56             | 19.56  | 23.25  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.36   | 1.67              | 1.67   | 1.99   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.29   | 5.35              | 5.35   | 6.38   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.12   | 3.84              | 3.84   | 4.56   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.12   | 3.84              | 3.84   | 4.56   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.13   | 7.54              | 7.85   | 10.17  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.11   | 1.37              | 1.37   | 1.63   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.58   | 1.94              | 1.94   | 2.31   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 47.28  | 58.21             | 58.19  | 69.19  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.80   | 7.14              | 7.14   | 8.49   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.51   | 1.86              | 1.86   | 2.21   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.49   | 6.76              | 6.76   | 8.04   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.68   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.63  | 14.35             | 14.35  | 17.07  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.42  | 16.56             | 16.56  | 19.70  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.84  | 19.54             | 19.54  | 23.24  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 21.65  | 26.66             | 26.65  | 31.69  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 15.57  | 19.17             | 19.17  | 22.79  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 41.01  | 51.06             | 51.11  | 60.95  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.19   | 1.46              | 1.46   | 1.74   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.13   | 1.40              | 1.40   | 1.66   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.45   | 3.02              | 3.01   | 3.58   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.87   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.45   | 0.56              | 0.56   | 0.66   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.21   | 2.72              | 2.72   | 3.23   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.40   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.43   | 2.99              | 2.99   | 3.55   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.01   | 1.25              | 1.25   | 1.48   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.19  | 29.78             | 29.77  | 35.40  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.87   | 2.31              | 2.30   | 2.74   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.86   | 2.29              | 2.29   | 2.72   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.24  | 13.84             | 13.84  | 16.45  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.30   | 8.99              | 8.99   | 10.69  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 206.70 | 254.52            | 254.43 | 302.50 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 114.93 | 141.53            | 141.47 | 168.20 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 207.51 | 255.52            | 255.43 | 303.68 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 206.95 | 254.83            | 254.74 | 302.86 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 206.70 | 254.52            | 254.43 | 302.50 |
| NJ portion of the Northeast<br>Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.72   | 0.89              | 0.88   | 1.05   |
| Nogales, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.61   | 0.75              | 0.75   | 0.90   |
| Norfolk-Virginia Beach-Newport News (Hampton)   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.06  | 25.93             | 25.92  | 30.82  |
| Oakridge, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Ogden Area, UT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Ogden Area, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Olmsted County; (part), MN  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Olmsted; City of Rochester, MN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.32   | 1.63              | 1.63   | 1.93   |
| Parkersburg-Marietta, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.57   | 3.16              | 3.16   | 3.76   |
| Parkersburg-Marietta, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.87   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                          | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.53   | 0.65              | 0.65   | 0.77   |
| Penns Grove Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Peoria County: Peoria, IL   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.09   | 1.34              | 1.34   | 1.60   |
| Perth Amboy Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.44   | 1.77              | 1.77   | 2.10   |
| Philadelphia-Camden County Area, PA-NJ  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.21  | 15.11             | 15.11  | 17.99  |
| Philadelphia-Wilmington, PA-NJ-DE   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 55.41  | 68.30             | 68.28  | 81.21  |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 55.41  | 68.30             | 68.28  | 81.21  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 89.62  | 110.43            | 110.40 | 131.28 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 83.64  | 103.07            | 103.04 | 122.53 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 45.23  | 55.69             | 55.67  | 66.19  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 47.47  | 58.46             | 58.43  | 69.47  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 47.44  | 58.41             | 58.39  | 69.42  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.84   | 1.04              | 1.04   | 1.24   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.32   | 6.55              | 6.55   | 7.79   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.48   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.40   | 2.95              | 2.95   | 3.51   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 25.44  | 31.32             | 31.31  | 37.23  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.44  | 31.32             | 31.31  | 37.23  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.14  | 28.49             | 28.48  | 33.86  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 23.14  | 28.49             | 28.48  | 33.86  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.49              | 0.49   | 0.59   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.09  | 18.58             | 18.58  | 22.09  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 9.50   | 11.70             | 11.69  | 13.90  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.69  | 15.63             | 15.62  | 18.58  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.21   | 1.49              | 1.49   | 1.77   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.39  | 15.26             | 15.25  | 18.14  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.35   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 5.15   | 6.34              | 6.34   | 7.54   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 17.89  | 22.03             | 22.02  | 26.19  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 30.25  | 37.25             | 37.23  | 44.27  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 5.65   | 6.96              | 6.96   | 8.27   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 5.65   | 6.96              | 6.96   | 8.27   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 5.65   | 6.96              | 6.96   | 8.27   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 4.19   | 5.16              | 5.16   | 6.14   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.75   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 18.20  | 22.41             | 22.40  | 26.63  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 5.71   | 7.03              | 7.03   | 8.35   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 5.71   | 7.03              | 7.03   | 8.35   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 6.67   | 8.21              | 8.21   | 9.76   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 199.00 | 247.14            | 247.32 | 294.76 |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 16.59  | 20.42             | 20.42  | 24.27  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.96   | 4.88              | 4.88   | 5.80   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.32   | 1.62              | 1.62   | 1.93   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 17.08  | 21.03             | 21.02  | 24.99  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.00  | 19.70             | 19.70  | 23.42  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 30.69  | 37.80             | 37.79  | 44.93  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 30.70  | 37.81             | 37.80  | 44.94  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.24  | 37.25             | 37.23  | 44.27  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.26   | 4.01              | 4.01   | 4.77   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.95   | 2.40              | 2.40   | 2.85   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 20.51  | 25.25             | 25.24  | 30.01  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.11  | 14.91             | 14.91  | 17.72  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 12.11  | 14.91             | 14.91  | 17.72  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 7.44   | 9.17              | 9.16   | 10.89  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 43.33  | 53.35             | 53.33  | 63.40  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.41  | 53.46             | 53.44  | 63.53  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 43.37  | 53.40             | 53.38  | 63.47  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 84.91  | 104.61            | 104.58 | 124.36 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 84.49  | 104.09            | 104.06 | 123.74 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 84.91  | 104.61            | 104.58 | 124.36 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 77.61  | 95.62             | 95.59  | 113.67 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 57.55  | 71.27             | 71.30  | 84.91  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 57.55  | 71.27             | 71.30  | 84.91  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 57.55  | 71.27             | 71.30  | 84.91  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.54  | 71.26             | 71.29  | 84.89  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.54  | 71.26             | 71.29  | 84.89  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.61   | 0.75              | 0.75   | 0.90   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.85  | 14.60             | 14.59  | 17.35  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.29   | 4.05              | 4.05   | 4.82   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 35.57  | 43.79             | 43.78  | 52.05  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.71   | 7.04              | 7.03   | 8.36   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.63   | 2.01              | 2.01   | 2.38   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 1.63   | 2.01              | 2.01   | 2.38   |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.69              | 0.69   | 0.82   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.54   | 0.66              | 0.66   | 0.79   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.42   | 7.90              | 7.90   | 9.39   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 3.71   | 4.57              | 4.57   | 5.43   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.83   | 4.71              | 4.71   | 5.60   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 13.71  | 16.89             | 16.88  | 20.07  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 2.15   | 2.65              | 2.65   | 3.15   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.42   | 0.64              | 0.66   | 0.82   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 11.22  | 13.82             | 13.81  | 16.42  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 40.81  | 52.71             | 53.01  | 63.85  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 40.52  | 52.35             | 52.65  | 63.43  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 40.52  | 52.35             | 52.65  | 63.43  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 2.77   | 3.41              | 3.41   | 4.05   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.85   | 1.05              | 1.05   | 1.24   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.67   | 5.75              | 5.75   | 6.83   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.02   | 8.65              | 8.65   | 10.28  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.42   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.74   | 2.15              | 2.15   | 2.55   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.63   | 0.78              | 0.78   | 0.93   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.29   | 1.59              | 1.59   | 1.89   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.93   | 1.14              | 1.14   | 1.36   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.43   | 11.67             | 11.67  | 13.90  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.13   | 1.39              | 1.39   | 1.66   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.95  | 13.48             | 13.48  | 16.02  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.15   | 6.34              | 6.34   | 7.54   |



**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.48   | 4.29              | 4.29   | 5.10   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.49  | 17.48             | 17.74  | 21.80  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 9.50   | 11.70             | 11.70  | 13.91  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.45              | 0.45   | 0.54   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.74   | 2.15              | 2.15   | 2.55   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.72   | 0.89              | 0.89   | 1.05   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.35              | 0.35   | 0.41   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.50   | 10.47             | 10.47  | 12.45  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 62.73  | 77.24             | 77.21  | 91.80  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 62.61  | 77.09             | 77.07  | 91.63  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 61.64  | 75.90             | 75.87  | 90.21  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.15   | 5.12              | 5.11   | 6.08   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.24   | 1.53              | 1.53   | 1.82   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.53   | 6.04              | 6.26   | 8.01   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.11   | 1.36              | 1.36   | 1.62   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.03   | 3.73              | 3.73   | 4.43   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.03   | 3.73              | 3.73   | 4.43   |

**Table A-43. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.77   | 5.87              | 5.87   | 6.98   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.38   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.48   | 1.82              | 1.82   | 2.16   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 6.19   | 7.62              | 7.62   | 9.06   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 4.77   | 5.87              | 5.87   | 6.98   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 11.87  | 14.62             | 14.61  | 17.37  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 2.46   | 3.03              | 3.03   | 3.60   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 2.11   | 2.59              | 2.59   | 3.08   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.94   | 7.16              | 7.16   | 8.38   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 28.61  | 34.46             | 34.45  | 40.34  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 24.22  | 29.17             | 29.16  | 34.15  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.85  | 14.27             | 14.27  | 16.70  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.22   | 5.08              | 5.08   | 5.95   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.70   | 2.05              | 2.05   | 2.39   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.53  | 12.69             | 12.69  | 14.85  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 13.11  | 15.79             | 15.79  | 18.49  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.11  | 15.79             | 15.79  | 18.49  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.52   | 3.04              | 3.04   | 3.56   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.47   | 2.98              | 2.98   | 3.49   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.91   | 2.31              | 2.31   | 2.70   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.26   | 1.51              | 1.51   | 1.77   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.81   | 5.80              | 5.79   | 6.79   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 56.77  | 69.25             | 69.25  | 81.36  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.80   | 4.58              | 4.58   | 5.36   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.22   | 1.47              | 1.47   | 1.72   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.60  | 13.98             | 13.97  | 16.36  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.79  | 14.20             | 14.20  | 16.62  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.63   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 127.95 | 154.12            | 154.09 | 180.43 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 116.74 | 140.62            | 140.59 | 164.63 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 128.05 | 154.24            | 154.21 | 180.57 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.01   | 1.22              | 1.22   | 1.43   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.39  | 13.15             | 13.16  | 15.61  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 56.86  | 68.49             | 68.48  | 80.18  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 56.04  | 67.50             | 67.49  | 79.03  |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 56.86  | 68.49             | 68.48  | 80.18  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 17.38  | 20.98             | 20.98  | 24.58  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.38  | 20.98             | 20.98  | 24.58  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.17  | 17.28             | 17.30  | 20.70  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.87   | 1.05              | 1.05   | 1.23   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.75   | 6.93              | 6.93   | 8.11   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.54   | 1.85              | 1.85   | 2.17   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.07  | 28.99             | 28.98  | 33.94  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 24.08  | 29.00             | 29.00  | 33.96  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 24.08  | 29.00             | 29.00  | 33.96  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.94   | 7.16              | 7.16   | 8.38   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 14.23  | 17.15             | 17.14  | 20.07  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 103.70 | 124.91            | 124.89 | 146.24 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 14.66  | 17.66             | 17.66  | 20.67  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.37  | 23.33             | 23.32  | 27.31  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.15   | 1.39              | 1.39   | 1.62   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.71   | 0.85              | 0.85   | 1.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.31   | 8.82              | 8.81   | 10.33  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.31   | 8.82              | 8.81   | 10.33  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.31   | 8.82              | 8.81   | 10.33  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.08   | 1.30              | 1.30   | 1.52   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.12   | 4.96              | 4.96   | 5.81   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.94   | 8.36              | 8.36   | 9.79   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.94   | 8.36              | 8.36   | 9.79   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.94   | 8.36              | 8.36   | 9.79   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.99  | 28.90             | 28.90  | 33.84  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 49.80  | 59.99             | 59.98  | 70.23  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 48.36  | 58.24             | 58.23  | 68.19  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.37  | 13.70             | 13.69  | 16.04  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 125.59 | 151.35            | 151.32 | 177.21 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 125.59 | 151.35            | 151.32 | 177.21 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 128.02 | 154.27            | 154.25 | 180.64 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.25   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.87   | 2.26              | 2.26   | 2.64   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.25   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.70   | 4.46              | 4.46   | 5.22   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.49  | 53.58             | 53.57  | 62.73  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 44.95  | 54.14             | 54.13  | 63.38  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 42.98  | 51.77             | 51.76  | 60.61  |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 29.96  | 36.09             | 36.08  | 42.25  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.80   | 6.99              | 6.99   | 8.18   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.97   | 5.98              | 5.98   | 7.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.94  | 21.60             | 21.60  | 25.29  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 56.19  | 67.68             | 67.67  | 79.24  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 56.14  | 67.62             | 67.60  | 79.16  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 51.62  | 62.18             | 62.17  | 72.80  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 51.18  | 61.65             | 61.64  | 72.17  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.07   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.24  | 12.33             | 12.33  | 14.44  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 39.77  | 47.90             | 47.89  | 56.08  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.77  | 47.90             | 47.89  | 56.08  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 35.89  | 43.22             | 43.22  | 50.61  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.35   | 1.63              | 1.63   | 1.91   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.33   | 1.61              | 1.61   | 1.88   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.04  | 15.70             | 15.70  | 18.39  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.84  | 21.49             | 21.49  | 25.16  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 142.00 | 171.04            | 171.01 | 200.25 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 144.92 | 174.55            | 174.52 | 204.35 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.96  | 28.86             | 28.86  | 33.79  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.76  | 25.00             | 25.00  | 29.27  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 48.25  | 58.36             | 58.35  | 68.40  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.99  | 76.12             | 76.11  | 89.19  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.99  | 76.12             | 76.11  | 89.19  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 28.02  | 36.40             | 36.44  | 43.50  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.99  | 15.89             | 15.94  | 19.49  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 99.59  | 122.61            | 122.64 | 144.43 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 97.61  | 120.22            | 120.24 | 141.63 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 97.61  | 120.22            | 120.24 | 141.63 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.78   | 0.93              | 0.93   | 1.09   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.49   | 3.00              | 3.00   | 3.51   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.47   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.22   | 2.10              | 2.11   | 2.67   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.83   | 9.48              | 9.48   | 11.11  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.39   | 0.51              | 0.51   | 0.61   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.67   | 5.63              | 5.62   | 6.59   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.50   | 5.43              | 5.42   | 6.35   |



**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.54   | 6.67              | 6.67   | 7.81   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 7.23   | 8.71              | 8.71   | 10.20  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 0.86              | 0.86   | 1.01   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 12.98  | 15.64             | 15.64  | 18.31  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.12   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 8.61   | 10.37             | 10.37  | 12.14  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.98   | 4.79              | 4.79   | 5.61   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 8.78   | 10.57             | 10.57  | 12.38  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.06   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 10.31  | 12.42             | 12.42  | 14.54  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 17.70  | 21.31             | 21.31  | 24.95  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.90   | 1.09              | 1.09   | 1.27   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 31.95  | 38.49             | 38.48  | 45.06  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 31.96  | 38.49             | 38.49  | 45.07  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 7.28   | 8.77              | 8.77   | 10.26  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.21   | 1.46              | 1.46   | 1.71   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.71  | 27.35             | 27.35  | 32.02  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 15.65  | 18.86             | 18.85  | 22.08  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.18   | 2.63              | 2.63   | 3.08   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 18.44  | 22.20             | 22.20  | 26.00  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.30  | 20.83             | 20.83  | 24.39  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 24.21  | 29.16             | 29.15  | 34.13  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 21.38  | 25.76             | 25.75  | 30.16  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.43   | 5.34              | 5.34   | 6.25   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 108.00 | 130.83            | 130.83 | 153.42 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 107.96 | 130.78            | 130.77 | 153.36 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.98   | 1.18              | 1.18   | 1.39   |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.86   | 4.65              | 4.65   | 5.45   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 7.07   | 8.52              | 8.52   | 9.97   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 4.01   | 4.83              | 4.83   | 5.65   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 4.85   | 5.84              | 5.84   | 6.84   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 4.85   | 5.84              | 5.84   | 6.84   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 4.85   | 5.84              | 5.84   | 6.83   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.18   | 2.06              | 2.07   | 2.62   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.77   | 2.13              | 2.13   | 2.49   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 47.81  | 57.59             | 57.58  | 67.42  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 36.89  | 44.44             | 44.43  | 52.03  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.72   | 10.50             | 10.50  | 12.29  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.96   | 2.36              | 2.36   | 2.77   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.45   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.71   | 4.47              | 4.47   | 5.23   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.69   | 4.45              | 4.45   | 5.21   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 3.69   | 4.45              | 4.45   | 5.21   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.99   | 1.20              | 1.20   | 1.40   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 2.85   | 3.43              | 3.43   | 4.02   |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.22   | 1.47              | 1.47   | 1.72   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.16   | 2.60              | 2.60   | 3.05   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.32   | 2.80              | 2.80   | 3.28   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.32   | 2.80              | 2.80   | 3.28   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.09              | 1.09   | 1.27   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.23   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.36  | 16.09             | 16.09  | 18.84  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.38  | 42.62             | 42.61  | 49.89  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.72   | 3.28              | 3.28   | 3.84   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.09   | 3.16              | 3.17   | 3.91   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.09   | 3.16              | 3.17   | 3.91   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.45   | 0.54              | 0.54   | 0.63   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.72   | 2.07              | 2.07   | 2.42   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.72   | 2.07              | 2.07   | 2.42   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.81   | 2.18              | 2.18   | 2.56   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.69  | 28.53             | 28.52  | 33.40  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.40  | 17.35             | 17.34  | 20.31  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.81  | 22.66             | 22.65  | 26.53  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.81  | 22.66             | 22.65  | 26.53  |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.19   | 5.04              | 5.04   | 5.90   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.51   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.14   | 6.20              | 6.20   | 7.25   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.53   | 6.66              | 6.66   | 7.80   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68   | 0.81              | 0.81   | 0.95   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.72   | 3.28              | 3.28   | 3.84   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 9.86   | 11.88             | 11.87  | 13.90  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.86   | 11.88             | 11.87  | 13.90  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.86   | 11.88             | 11.87  | 13.90  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.86   | 11.88             | 11.87  | 13.90  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.50   | 5.43              | 5.42   | 6.35   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.19  | 14.69             | 14.68  | 17.20  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 29.88  | 35.98             | 35.98  | 42.13  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.17  | 36.34             | 36.34  | 42.55  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.99   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.96   | 3.64              | 3.64   | 4.29   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.34              | 0.34   | 0.40   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.99   | 3.65              | 3.65   | 4.29   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.75   | 2.11              | 2.11   | 2.47   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.48   | 1.78              | 1.78   | 2.09   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.04   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 290.05 | 352.65            | 352.65 | 413.96 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 21.17  | 28.79             | 28.84  | 34.80  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 21.17  | 28.79             | 28.84  | 34.80  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 290.33 | 352.98            | 352.98 | 414.35 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 290.31 | 352.96            | 352.95 | 414.32 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 290.24 | 352.88            | 352.88 | 414.23 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 290.29 | 352.93            | 352.93 | 414.29 |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 290.05 | 352.65            | 352.65 | 413.96 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.86  | 28.74             | 28.74  | 33.65  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.03  | 27.74             | 27.74  | 32.48  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.02   | 2.44              | 2.44   | 2.85   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.99   | 7.31              | 7.31   | 8.59   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.52   | 5.44              | 5.44   | 6.37   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.52   | 5.44              | 5.44   | 6.37   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.66   | 10.66             | 10.72  | 13.76  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.55   | 1.87              | 1.87   | 2.19   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.29   | 2.75              | 2.75   | 3.22   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 68.47  | 82.48             | 82.46  | 96.56  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.29   | 9.98              | 9.98   | 11.69  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.19   | 2.64              | 2.64   | 3.09   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.85   | 1.03              | 1.03   | 1.20   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.96   | 9.59              | 9.58   | 11.22  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.68   | 0.81              | 0.81   | 0.95   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.97   | 2.38              | 2.38   | 2.78   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 16.84  | 20.34             | 20.33  | 23.83  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 19.45  | 23.47             | 23.47  | 27.50  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.98  | 27.73             | 27.73  | 32.48  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 31.39  | 37.81             | 37.80  | 44.26  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 22.57  | 27.19             | 27.19  | 31.83  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 59.42  | 72.44             | 72.45  | 85.10  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.72   | 2.08              | 2.08   | 2.43   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 1.98              | 1.98   | 2.32   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.31   | 3.99              | 3.99   | 4.67   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.94   | 2.34              | 2.34   | 2.74   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.86   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.15   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.20   | 3.86              | 3.86   | 4.52   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.41   | 0.49              | 0.49   | 0.57   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 3.51   | 4.23              | 4.23   | 4.95   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.51   | 1.82              | 1.81   | 2.13   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.05  | 42.22             | 42.21  | 49.43  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.57   | 3.10              | 3.10   | 3.63   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.56   | 3.09              | 3.09   | 3.62   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.29  | 19.62             | 19.61  | 22.96  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.58  | 12.75             | 12.75  | 14.92  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 299.63 | 360.90            | 360.84 | 422.52 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 166.83 | 200.94            | 200.91 | 235.25 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 300.82 | 362.33            | 362.27 | 424.20 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 300.16 | 361.54            | 361.48 | 423.28 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 299.63 | 360.90            | 360.84 | 422.52 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.07   | 1.29              | 1.29   | 1.51   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.92   | 1.10              | 1.10   | 1.29   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.57  | 36.82             | 36.81  | 43.10  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.56              | 0.56   | 0.66   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.90   | 2.29              | 2.29   | 2.68   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.25   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.85   | 2.23              | 2.23   | 2.61   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.78   | 0.93              | 0.93   | 1.09   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.53   | 1.85              | 1.85   | 2.16   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.34   | 2.82              | 2.82   | 3.30   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.69  | 21.42             | 21.42  | 25.11  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 80.28  | 96.81             | 96.79  | 113.38 |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 80.28  | 96.81             | 96.79  | 113.38 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 129.93 | 156.62            | 156.59 | 183.40 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 121.36 | 146.29            | 146.27 | 171.31 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 65.42  | 78.79             | 78.78  | 92.25  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.75  | 82.80             | 82.79  | 96.94  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.70  | 82.74             | 82.73  | 96.87  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.66   | 0.80              | 0.80   | 0.93   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.87   | 9.47              | 9.47   | 11.09  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.13   | 3.78              | 3.78   | 4.42   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 36.86  | 44.40             | 44.39  | 51.98  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 36.86  | 44.40             | 44.39  | 51.98  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 33.56  | 40.42             | 40.41  | 47.32  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 33.56  | 40.42             | 40.41  | 47.32  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.58   | 0.70              | 0.70   | 0.82   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 21.96  | 26.45             | 26.45  | 30.97  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 13.75  | 16.56             | 16.56  | 19.39  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 18.39  | 22.15             | 22.15  | 25.94  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.81   | 2.18              | 2.18   | 2.55   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 17.97  | 21.65             | 21.64  | 25.34  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.29   | 1.56              | 1.56   | 1.82   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 7.46   | 8.99              | 8.99   | 10.52  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 25.93  | 31.23             | 31.22  | 36.56  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 43.87  | 52.84             | 52.83  | 61.86  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 8.19   | 9.87              | 9.87   | 11.55  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 8.19   | 9.87              | 9.87   | 11.55  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 8.19   | 9.87              | 9.87   | 11.55  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.95   | 7.16              | 7.16   | 8.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.92   | 1.11              | 1.11   | 1.30   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 26.37  | 31.76             | 31.76  | 37.18  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 8.03   | 9.68              | 9.67   | 11.33  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 8.03   | 9.68              | 9.67   | 11.33  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 9.38   | 11.30             | 11.30  | 13.23  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 288.91 | 351.27            | 351.27 | 412.35 |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 24.04  | 28.95             | 28.95  | 33.90  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.74   | 6.92              | 6.91   | 8.10   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.91   | 2.30              | 2.30   | 2.70   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.85   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.80   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 24.01  | 28.92             | 28.91  | 33.86  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.19  | 27.93             | 27.92  | 32.70  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 44.58  | 53.70             | 53.69  | 62.88  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 44.58  | 53.71             | 53.70  | 62.88  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 44.03  | 53.05             | 53.04  | 62.11  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.82   | 5.81              | 5.81   | 6.80   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.66   | 3.21              | 3.21   | 3.75   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 29.77  | 35.85             | 35.85  | 41.98  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 17.55  | 21.14             | 21.13  | 24.75  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 17.55  | 21.14             | 21.13  | 24.75  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 9.94   | 11.98             | 11.98  | 14.03  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 62.81  | 75.66             | 75.64  | 88.58  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.90  | 75.77             | 75.75  | 88.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 62.88  | 75.74             | 75.73  | 88.67  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 123.21 | 148.50            | 148.48 | 173.88 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 122.57 | 147.72            | 147.70 | 172.98 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 123.21 | 148.50            | 148.48 | 173.88 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 112.55 | 135.66            | 135.64 | 158.85 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 83.69  | 101.44            | 101.44 | 118.98 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 83.69  | 101.44            | 101.44 | 118.98 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 83.69  | 101.44            | 101.44 | 118.98 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 83.68  | 101.43            | 101.42 | 118.96 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 83.68  | 101.43            | 101.42 | 118.96 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.92   | 1.10              | 1.10   | 1.29   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.18  | 20.69             | 20.69  | 24.22  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.78   | 5.76              | 5.76   | 6.74   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 51.49  | 62.01             | 62.00  | 72.60  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.18   | 9.85              | 9.85   | 11.53  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.36   | 2.84              | 2.84   | 3.33   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 2.36   | 2.84              | 2.84   | 3.33   |

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.50   | 0.60              | 0.60   | 0.70   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.13   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.30   | 11.20             | 11.20  | 13.11  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 5.30   | 6.38              | 6.38   | 7.47   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 5.46   | 6.58              | 6.58   | 7.71   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 19.87  | 23.94             | 23.93  | 28.02  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.24   | 3.90              | 3.90   | 4.57   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.60   | 0.91              | 0.91   | 1.13   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 15.92  | 19.17             | 19.17  | 22.45  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 58.86  | 74.74             | 74.80  | 88.78  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 58.44  | 74.23             | 74.29  | 88.19  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 58.44  | 74.23             | 74.29  | 88.19  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 4.01   | 4.83              | 4.83   | 5.65   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.57   | 7.92              | 7.92   | 9.27   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.18  | 12.26             | 12.26  | 14.35  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.53   | 3.04              | 3.04   | 3.56   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.63   | 0.75              | 0.75   | 0.88   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.35   | 1.62              | 1.62   | 1.90   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.66  | 16.56             | 16.56  | 19.42  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.68   | 2.02              | 2.02   | 2.37   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.89  | 19.14             | 19.14  | 22.41  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.08   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.86   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.46   | 8.99              | 8.99   | 10.52  |



**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.04   | 6.07              | 6.07   | 7.11   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 17.85  | 24.78             | 24.83  | 30.10  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 13.77  | 16.59             | 16.58  | 19.42  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.53   | 3.04              | 3.04   | 3.56   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.45   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.54   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.32  | 14.84             | 14.84  | 17.38  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 90.90  | 109.49            | 109.47 | 128.19 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 90.74  | 109.29            | 109.27 | 127.95 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 89.33  | 107.59            | 107.58 | 125.96 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 5.88   | 7.09              | 7.09   | 8.30   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.87   | 2.26              | 2.26   | 2.64   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.40   | 9.16              | 9.21   | 11.61  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.66   | 1.99              | 1.99   | 2.34   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.39   | 5.29              | 5.29   | 6.19   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.39   | 5.29              | 5.29   | 6.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-44. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Direct and Indirect Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.90   | 8.32              | 8.31   | 9.73   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.53   | 5.46              | 5.46   | 6.39   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 2.15   | 2.59              | 2.59   | 3.04   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 8.97   | 10.80             | 10.80  | 12.65  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 6.91   | 8.32              | 8.32   | 9.74   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 17.20  | 20.72             | 20.71  | 24.25  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 3.58   | 4.31              | 4.31   | 5.04   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.03   | 3.65              | 3.65   | 4.27   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.32              | 0.34   | 0.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.09              | 0.09   | 0.12   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.08              | 0.08   | 0.11   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.09              | 0.09   | 0.12   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.25   | 1.70              | 1.84   | 2.24   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.25   | 1.70              | 1.84   | 2.24   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.63   | 0.86              | 0.92   | 1.13   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.39   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.39   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.08              | 0.08   | 0.11   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.20   | 0.24   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.50   | 0.65              | 0.69   | 0.86   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.65              | 0.69   | 0.86   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.50   | 0.65              | 0.69   | 0.86   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.02   | 0.03   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.10   | 0.11              | 0.10   | 0.15   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.11              | 0.11   | 0.15   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.20   | 0.27              | 0.28   | 0.35   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.28              | 0.30   | 0.37   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.28              | 0.30   | 0.37   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.11              | 0.12   | 0.15   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.10   | 0.11              | 0.12   | 0.15   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.10   | 0.11              | 0.12   | 0.15   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.26   | 0.31   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.19   | 1.60              | 1.72   | 2.11   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.19   | 1.60              | 1.72   | 2.11   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.20   | 0.24   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.25   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.02              | 0.02   | 0.03   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.24              | 0.26   | 0.32   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.24              | 0.26   | 0.32   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.39   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.33              | 0.35   | 0.43   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.45   | 0.61              | 0.66   | 0.81   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.95   | 1.23              | 1.31   | 1.63   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.77   | 1.05              | 1.13   | 1.38   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.77   | 1.05              | 1.13   | 1.38   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.95   | 1.23              | 1.31   | 1.63   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.95   | 1.23              | 1.31   | 1.63   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.95   | 1.23              | 1.31   | 1.63   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.95   | 1.23              | 1.31   | 1.63   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.95   | 1.23              | 1.31   | 1.63   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.30              | 0.33   | 0.40   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.18   | 0.21   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.16   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.32              | 0.34   | 0.43   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.32   | 0.36              | 0.37   | 0.49   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.32   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.32   | 0.36              | 0.37   | 0.49   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.36              | 0.37   | 0.49   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.36              | 0.37   | 0.49   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.29              | 0.32   | 0.39   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.80   | 1.07              | 1.15   | 1.42   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.80   | 1.07              | 1.15   | 1.42   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 1.11              | 1.19   | 1.46   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.83   | 1.10              | 1.18   | 1.46   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.95   | 1.23              | 1.31   | 1.63   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.09   | 0.11              | 0.12   | 0.15   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.09   | 0.11              | 0.12   | 0.15   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.12   | 0.15   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.00   | 1.34              | 1.44   | 1.77   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.00   | 1.34              | 1.44   | 1.77   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.00   | 1.34              | 1.44   | 1.77   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.99   | 1.33              | 1.43   | 1.76   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.40   | 0.55              | 0.59   | 0.72   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.27   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.27   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.20              | 0.21   | 0.27   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.31              | 0.33   | 0.41   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.76   | 1.04              | 1.12   | 1.37   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.06              | 0.06   | 0.09   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.16   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.16   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-45. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.40  | -0.53             | -0.51  | -0.64  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.73  | -2.26             | -2.08  | -2.55  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.65  | -2.20             | -2.12  | -2.64  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.80  | -1.07             | -1.03  | -1.28  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.29  | -0.38             | -0.37  | -0.46  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.10  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.72  | -0.95             | -0.92  | -1.15  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.89  | -1.19             | -1.14  | -1.43  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.89  | -1.19             | -1.14  | -1.43  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.17  | -0.23             | -0.22  | -0.27  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.22             | -0.22  | -0.27  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.14  | -0.18             | -0.17  | -0.22  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.14  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.33  | -0.44             | -0.42  | -0.53  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.09   | 4.22              | 6.56   | 9.51   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.26  | -0.34             | -0.33  | -0.42  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.11             | -0.11  | -0.13  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.74  | -0.97             | -0.92  | -1.13  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.80  | -1.07             | -1.03  | -1.28  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -8.71  | -11.60            | -11.18 | -13.97 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -7.95  | -10.59            | -10.20 | -12.74 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.72  | -11.61            | -11.18 | -13.98 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.41              | 0.74   | 1.10   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -3.87  | -5.15             | -4.96  | -6.20  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -3.81  | -5.08             | -4.89  | -6.11  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.87  | -5.15             | -4.96  | -6.20  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 34.27  | 54.25             | 67.32  | 92.02  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.27  | 54.25             | 67.32  | 92.02  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 17.01  | 26.97             | 33.53  | 45.86  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.10  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.39  | -0.52             | -0.50  | -0.63  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.11   | 9.65              | 11.94  | 16.30  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.22   | 9.80              | 12.08  | 16.48  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.56  | -2.07             | -1.96  | -2.43  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.57  | -2.07             | -1.96  | -2.44  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -1.57  | -2.07             | -1.96  | -2.44  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.40  | -0.53             | -0.51  | -0.64  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.74  | -0.93             | -0.81  | -0.96  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -6.84  | -9.06             | -8.63  | -10.74 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -1.00  | -1.33             | -1.28  | -1.60  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.79   | 5.97              | 7.36   | 10.04  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -1.32  | -1.76             | -1.69  | -2.11  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.13  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.10   | 5.00              | 6.34   | 8.72   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.10   | 5.00              | 6.34   | 8.72   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.10   | 5.00              | 6.34   | 8.72   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.07  | -0.10             | -0.09  | -0.12  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.28  | -0.37             | -0.36  | -0.45  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.47  | -0.63             | -0.61  | -0.76  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.47  | -0.63             | -0.61  | -0.76  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.47  | -0.63             | -0.61  | -0.76  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.63  | -2.18             | -2.10  | -2.62  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -3.37  | -4.49             | -4.33  | -5.41  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.27  | -4.35             | -4.19  | -5.24  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.60  | -0.76             | -0.66  | -0.79  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.24   | 7.17              | 11.91  | 17.51  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.24   | 7.17              | 11.91  | 17.51  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.08   | 6.96              | 11.70  | 17.25  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.25  | -0.34             | -0.32  | -0.41  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.25  | -0.34             | -0.32  | -0.41  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.25  | -0.33             | -0.32  | -0.40  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.00  | -3.99             | -3.83  | -4.78  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.03  | -4.03             | -3.87  | -4.83  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.90  | -3.85             | -3.70  | -4.62  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.96  | -2.59             | -2.46  | -3.06  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.39  | -0.53             | -0.51  | -0.63  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.34  | -0.45             | -0.43  | -0.54  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.22  | -1.62             | -1.56  | -1.95  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -3.82  | -5.09             | -4.90  | -6.13  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.82  | -5.09             | -4.90  | -6.12  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.52  | -4.68             | -4.51  | -5.64  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -3.48  | -4.64             | -4.47  | -5.58  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.65  | -0.85             | -0.80  | -0.99  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.71  | -3.61             | -3.47  | -4.34  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -2.71  | -3.61             | -3.47  | -4.34  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.44  | -3.26             | -3.14  | -3.92  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.12             | -0.12  | -0.14  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.94  | -1.25             | -1.20  | -1.50  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.21  | -1.61             | -1.56  | -1.94  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -9.54  | -12.67            | -12.15 | -15.16 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -9.73  | -12.94            | -12.41 | -15.47 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.63  | -2.17             | -2.09  | -2.62  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.41  | -1.88             | -1.81  | -2.27  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.59   | 3.30              | 5.24   | 7.62   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.69   | 2.12              | 4.15   | 6.29   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.69   | 2.12              | 4.15   | 6.29   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.13  | -1.27             | -0.81  | -0.80  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.60   | 1.04              | 1.41   | 1.99   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -5.57  | -7.18             | -6.49  | -7.90  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.43  | -7.00             | -6.32  | -7.68  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -5.43  | -7.00             | -6.32  | -7.68  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.04  | -0.06             | -0.05  | -0.07  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.06             | -0.06  | -0.07  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.14  | -0.19             | -0.18  | -0.23  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.98   | 7.84              | 9.68   | 13.21  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.77   | 1.22              | 1.52   | 2.07   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.54   | 0.98              | 1.41   | 2.01   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.07   | 1.69              | 2.09   | 2.85   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.32  | -0.42             | -0.41  | -0.51  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | -0.01             | 0.00   | -0.01  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.29  | -0.39             | -0.37  | -0.46  |



**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.38  | -0.50             | -0.48  | -0.60  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -0.48  | -0.64             | -0.62  | -0.77  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.12   | 0.19              | 0.24   | 0.34   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.09   | 0.15              | 0.21   | 0.29   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.08  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.88  | -1.18             | -1.13  | -1.42  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.15  | -0.20             | -0.20  | -0.25  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.59  | -0.78             | -0.75  | -0.94  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.27  | -0.36             | -0.35  | -0.43  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -0.60  | -0.80             | -0.77  | -0.96  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -0.71  | -0.94             | -0.90  | -1.12  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.20  | -1.60             | -1.54  | -1.93  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.56   | 0.88              | 1.09   | 1.49   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -2.18  | -2.91             | -2.80  | -3.50  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -2.18  | -2.91             | -2.80  | -3.50  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.39  | -0.50             | -0.44  | -0.52  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.08  | -0.11             | -0.11  | -0.13  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.55  | -2.06             | -1.98  | -2.48  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.07  | -1.42             | -1.37  | -1.71  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.25  | -1.67             | -1.61  | -2.01  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.18  | -1.57             | -1.51  | -1.89  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.65  | -2.19             | -2.11  | -2.64  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.45  | -1.93             | -1.86  | -2.33  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.30  | -0.40             | -0.39  | -0.48  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 24.68  | 40.62             | 52.71  | 72.99  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.68  | 40.63             | 52.72  | 73.00  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.54   | 5.63              | 7.04   | 9.64   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.32   | 5.34              | 6.76   | 9.29   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.27  | -0.36             | -0.34  | -0.43  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.33  | -0.44             | -0.42  | -0.53  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.33  | -0.44             | -0.42  | -0.53  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.33  | -0.44             | -0.42  | -0.53  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.77   | 1.22              | 1.52   | 2.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.25  | -4.34             | -4.18  | -5.22  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -2.51  | -3.35             | -3.22  | -4.03  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.63  | -0.84             | -0.81  | -1.01  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.24  | -0.32             | -0.31  | -0.38  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.25  | -0.34             | -0.32  | -0.40  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.25  | -0.34             | -0.32  | -0.40  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.19  | -0.26             | -0.25  | -0.31  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.16  | -0.21             | -0.21  | -0.26  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.16  | -0.21             | -0.21  | -0.26  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.91  | -1.21             | -1.17  | -1.46  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.41  | -3.21             | -3.09  | -3.86  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.19  | -0.25             | -0.24  | -0.30  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.69   | 1.11              | 1.42   | 1.95   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.69   | 1.11              | 1.42   | 1.95   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.14  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.08  | -0.11             | -0.11  | -0.14  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.61  | -2.15             | -2.07  | -2.59  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.98  | -1.30             | -1.26  | -1.57  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.28  | -1.71             | -1.64  | -2.05  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.28  | -1.71             | -1.64  | -2.05  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.28  | -0.38             | -0.37  | -0.46  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.35  | -0.47             | -0.45  | -0.56  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.59   | 7.32              | 9.17   | 12.58  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.07             | -0.06  | -0.08  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.77   | 7.56              | 9.41   | 12.87  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.67  | -0.89             | -0.86  | -1.08  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.67  | -0.89             | -0.86  | -1.08  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.67  | -0.89             | -0.86  | -1.08  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.67  | -0.89             | -0.86  | -1.08  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.29  | -0.39             | -0.37  | -0.46  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.83  | -1.11             | -1.07  | -1.33  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -1.95  | -2.58             | -2.45  | -3.05  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.98  | -2.61             | -2.48  | -3.09  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 6.22   | 9.79              | 12.08  | 16.48  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.59   | 10.42             | 12.92  | 17.65  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.61  | 19.91             | 24.62  | 33.62  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.31   | 8.33              | 17.23  | 26.36  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 20.44  | 32.48             | 40.48  | 55.41  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 20.44  | 32.48             | 40.48  | 55.41  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.29   | 8.31              | 17.21  | 26.33  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2.29   | 8.31              | 17.21  | 26.34  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.29   | 8.31              | 17.22  | 26.34  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.29   | 8.31              | 17.21  | 26.34  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.31   | 8.33              | 17.23  | 26.36  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.62  | -2.16             | -2.08  | -2.59  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.56  | -2.08             | -2.00  | -2.50  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.13  | -0.18             | -0.17  | -0.21  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.82   | 9.27              | 11.59  | 15.87  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.31  | -0.41             | -0.39  | -0.49  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.31  | -0.41             | -0.39  | -0.49  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.33   | 5.27              | 6.51   | 8.90   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.15             | -0.15  | -0.18  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.16  | -0.21             | -0.20  | -0.25  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -4.67  | -6.22             | -5.99  | -7.48  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.58  | -0.77             | -0.74  | -0.93  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.20             | -0.19  | -0.24  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.06  | -0.08             | -0.07  | -0.09  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.46   | 3.88              | 4.79   | 6.54   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.54  | -0.72             | -0.70  | -0.87  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.12  | -0.16             | -0.16  | -0.20  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.29   | 2.31              | 3.26   | 4.62   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.12   | 2.08              | 3.04   | 4.34   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.88   | 1.76              | 2.73   | 3.96   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -2.05  | -2.71             | -2.58  | -3.20  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.49  | -1.97             | -1.87  | -2.33  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.92   | 3.99              | 6.34   | 9.24   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.62   | 1.01              | 1.28   | 1.77   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.63   | 1.01              | 1.29   | 1.78   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.25  | -0.33             | -0.31  | -0.39  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.05             | -0.04  | -0.05  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.03  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.22  | -0.29             | -0.28  | -0.35  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.24  | -0.32             | -0.31  | -0.38  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.10  | -0.13             | -0.13  | -0.16  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.39  | -3.18             | -3.06  | -3.82  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.19  | -0.25             | -0.24  | -0.30  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.19  | -0.25             | -0.24  | -0.30  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.11  | -1.48             | -1.42  | -1.78  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.72  | -0.96             | -0.92  | -1.16  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -17.20 | -22.14            | -19.97 | -24.25 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -8.79  | -11.10            | -9.61  | -11.44 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -17.28 | -22.25            | -20.07 | -24.38 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -17.22 | -22.17            | -20.00 | -24.28 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -17.20 | -22.14            | -19.97 | -24.25 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -2.07  | -2.76             | -2.66  | -3.33  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.17             | -0.17  | -0.21  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.25  | -0.34             | -0.33  | -0.41  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.13  | -0.17             | -0.16  | -0.20  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.50   | 0.81              | 1.05   | 1.45   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.71   | 7.70              | 9.93   | 13.72  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.87  | 26.32             | 34.41  | 47.75  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 15.87  | 26.32             | 34.41  | 47.75  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.51  | 21.83             | 30.09  | 42.36  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.10  | 22.62             | 30.85  | 43.31  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -4.47  | -5.95             | -5.73  | -7.16  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.69  | -6.24             | -6.01  | -7.51  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.68  | -6.24             | -6.01  | -7.51  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.15   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.11             | -0.10  | -0.13  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.05             | -0.04  | -0.06  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.51  | -0.68             | -0.66  | -0.82  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.23  | -0.31             | -0.29  | -0.36  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -2.15  | -2.78             | -2.52  | -3.07  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.15  | -2.78             | -2.52  | -3.07  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.92  | -2.47             | -2.23  | -2.70  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.92  | -2.47             | -2.23  | -2.70  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.48  | -1.97             | -1.89  | -2.37  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.93  | -1.23             | -1.18  | -1.48  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.25  | -1.67             | -1.61  | -2.01  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.22  | -1.62             | -1.56  | -1.95  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.51  | -0.68             | -0.65  | -0.81  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.76  | -2.35             | -2.26  | -2.83  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -2.98  | -3.97             | -3.83  | -4.78  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.56  | -0.74             | -0.72  | -0.89  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.56  | -0.74             | -0.72  | -0.89  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.56  | -0.74             | -0.72  | -0.89  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.42  | -0.56             | -0.54  | -0.68  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -1.11  | -1.31             | -0.97  | -1.06  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.58  | -0.77             | -0.74  | -0.93  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.58  | -0.77             | -0.74  | -0.93  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.68  | -0.90             | -0.87  | -1.08  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2.39   | 8.44              | 17.34  | 26.49  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.64  | -2.18             | -2.10  | -2.62  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.39  | -0.52             | -0.50  | -0.63  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.13  | -0.17             | -0.17  | -0.21  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.13              | 0.17   | 0.24   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -1.72  | -2.29             | -2.21  | -2.76  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.58  | -2.10             | -2.03  | -2.53  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -1.28  | -1.28             | -0.49  | -0.23  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -1.28  | -1.28             | -0.50  | -0.23  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.23  | -1.21             | -0.43  | -0.15  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.32  | -0.42             | -0.40  | -0.51  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.00   | 1.62              | 2.07   | 2.86   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.55  | -0.37             | 0.27   | 0.66   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.30              | 0.80   | 1.26   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.30              | 0.80   | 1.26   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -0.78  | -1.04             | -1.00  | -1.25  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.27  | -5.69             | -5.48  | -6.85  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.28  | -5.71             | -5.49  | -6.87  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -4.28  | -5.70             | -5.49  | -6.86  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.88  | 30.19             | 40.23  | 56.12  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.93  | 30.25             | 40.29  | 56.19  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.88  | 30.19             | 40.23  | 56.12  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 18.60  | 31.14             | 41.15  | 57.27  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -4.74  | -6.11             | -5.52  | -6.71  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -4.74  | -6.11             | -5.52  | -6.71  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -4.74  | -6.11             | -5.52  | -6.71  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.74  | -6.11             | -5.52  | -6.71  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.74  | -6.11             | -5.52  | -6.71  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.22              | 0.27   | 0.37   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.17  | -1.56             | -1.50  | -1.87  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.32  | -0.43             | -0.42  | -0.52  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -3.45  | -4.59             | -4.39  | -5.48  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.51  | -0.67             | -0.62  | -0.76  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.16  | -0.21             | -0.21  | -0.26  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.16  | -0.21             | -0.21  | -0.26  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.09  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.04  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.63  | -0.84             | -0.81  | -1.01  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -0.37  | -0.49             | -0.48  | -0.59  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.38  | -0.51             | -0.49  | -0.61  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.35  | -1.80             | -1.74  | -2.17  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.21  | -0.28             | -0.26  | -0.33  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.45  | 18.03             | 22.24  | 30.35  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.12  | -1.50             | -1.44  | -1.80  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.28  | 0.46              | 1.88   | 3.11   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.25  | 0.50              | 1.92   | 3.16   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.25  | 0.50              | 1.92   | 3.16   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.27  | -0.36             | -0.35  | -0.44  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.08  | -0.11             | -0.11  | -0.13  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.13  | -0.17             | -0.15  | -0.18  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.13  | -0.17             | -0.15  | -0.18  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.13  | -0.17             | -0.15  | -0.18  |

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.45  | -0.60             | -0.57  | -0.70  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.69  | -0.92             | -0.88  | -1.10  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.10              | 0.18   | 0.27   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.23              | 0.31   | 0.43   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.17             | -0.17  | -0.21  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.09  | -0.12             | -0.12  | -0.15  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.33   | 8.61              | 10.95  | 15.08  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.15             | -0.14  | -0.18  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.08  | -1.44             | -1.38  | -1.73  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.51  | -0.68             | -0.65  | -0.81  |



**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.34  | -0.46             | -0.44  | -0.55  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 20.72  | 32.85             | 40.84  | 55.86  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.93  | -1.24             | -1.20  | -1.50  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.10              | 0.18   | 0.27   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.10             | -0.09  | -0.11  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.52   | 2.40              | 2.96   | 4.04   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.51   | 2.38              | 2.95   | 4.02   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.51   | 2.38              | 2.94   | 4.02   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.84  | -1.12             | -1.08  | -1.35  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -6.19  | -8.24             | -7.94  | -9.92  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -6.17  | -8.22             | -7.92  | -9.90  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.08  | -8.10             | -7.80  | -9.75  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.42  | -0.56             | -0.54  | -0.67  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.16             | -0.15  | -0.19  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.88   | 1.41              | 1.78   | 2.44   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.10  | -0.14             | -0.13  | -0.17  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.18   | 3.51              | 4.43   | 6.09   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.18   | 3.51              | 4.43   | 6.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-46. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.47  | -0.63             | -0.60  | -0.76  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.29  | -0.38             | -0.37  | -0.46  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.05  | -0.07             | -0.06  | -0.08  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.19             | -0.19  | -0.23  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.61  | -0.81             | -0.78  | -0.98  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -0.47  | -0.63             | -0.60  | -0.75  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.17  | -1.56             | -1.50  | -1.88  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.24  | -0.32             | -0.31  | -0.39  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.21  | -0.28             | -0.27  | -0.34  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.25  | -1.39             | -1.37  | -1.58  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.42  | -5.57             | -5.45  | -6.13  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.13  | -5.67             | -5.61  | -6.47  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -2.50  | -2.76             | -2.73  | -3.14  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.89  | -0.99             | -0.98  | -1.13  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.28  | -0.27             | -0.27  | -0.30  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.04              | 0.05   | 0.07   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.19  | -0.18             | -0.18  | -0.19  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.23  | -2.46             | -2.44  | -2.81  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -2.78  | -3.07             | -3.03  | -3.49  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.78  | -3.07             | -3.03  | -3.49  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.53  | -0.59             | -0.58  | -0.67  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.52  | -0.58             | -0.57  | -0.66  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.41  | -0.46             | -0.45  | -0.52  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.27  | -0.29             | -0.29  | -0.34  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.02  | -1.13             | -1.12  | -1.29  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.76   | 18.16             | 19.65  | 26.61  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.22              | 0.23   | 0.30   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.81  | -0.89             | -0.88  | -1.02  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.26  | -0.29             | -0.28  | -0.33  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.31  | -2.45             | -2.41  | -2.75  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.49  | -2.75             | -2.72  | -3.14  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.12  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -27.12 | -29.98            | -29.66 | -34.18 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -24.75 | -27.35            | -27.06 | -31.18 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -27.15 | -30.00            | -29.68 | -34.21 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.39   | 2.05              | 2.26   | 3.14   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -12.05 | -13.32            | -13.18 | -15.19 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -11.87 | -13.12            | -12.98 | -14.96 |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -12.05 | -13.32            | -13.18 | -15.19 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 102.16 | 183.92            | 192.10 | 245.30 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 102.16 | 183.92            | 192.10 | 245.30 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 50.67  | 91.62             | 95.73  | 122.32 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.23  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.22  | -1.35             | -1.33  | -1.54  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.10  | -0.12             | -0.11  | -0.13  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.24  | 32.62             | 34.05  | 43.44  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 18.57  | 32.99             | 34.41  | 43.86  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.88  | -5.25             | -5.17  | -5.91  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.89  | -5.25             | -5.18  | -5.92  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -4.89  | -5.25             | -5.18  | -5.92  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.25  | -1.39             | -1.37  | -1.58  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -2.35  | -2.18             | -2.10  | -2.27  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -21.34 | -23.16            | -22.85 | -26.19 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -3.10  | -3.43             | -3.39  | -3.91  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.31  | 20.09             | 20.96  | 26.72  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -4.11  | -4.54             | -4.49  | -5.17  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.24  | -0.27             | -0.27  | -0.31  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.18   | 17.35             | 18.19  | 23.39  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.18   | 17.35             | 18.19  | 23.39  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 9.18   | 17.35             | 18.19  | 23.39  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.29  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.87  | -0.96             | -0.95  | -1.10  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.47  | -1.63             | -1.61  | -1.85  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.47  | -1.63             | -1.61  | -1.85  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.47  | -1.63             | -1.61  | -1.85  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -5.09  | -5.62             | -5.56  | -6.41  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -10.53 | -11.64            | -11.51 | -13.27 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -10.21 | -11.29            | -11.17 | -12.87 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.91  | -1.77             | -1.70  | -1.84  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 8.56   | 33.05             | 36.06  | 49.50  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.56   | 33.05             | 36.06  | 49.50  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.05   | 32.48             | 35.50  | 48.86  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.79  | -0.87             | -0.86  | -0.99  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.36  | -0.40             | -0.40  | -0.46  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.79  | -0.87             | -0.86  | -0.99  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.78  | -0.86             | -0.85  | -0.98  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -9.34  | -10.27            | -10.15 | -11.68 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.44  | -10.38            | -10.26 | -11.81 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -9.03  | -9.92             | -9.81  | -11.28 |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -6.11  | -6.61             | -6.52  | -7.46  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.23  | -1.36             | -1.34  | -1.55  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.05  | -1.16             | -1.15  | -1.33  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.79  | -4.19             | -4.15  | -4.78  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -11.90 | -13.16            | -13.02 | -15.00 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -11.89 | -13.15            | -13.00 | -14.99 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -10.95 | -12.10            | -11.97 | -13.79 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -10.84 | -11.98            | -11.86 | -13.66 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.16  | -0.18             | -0.18  | -0.21  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.03  | -2.15             | -2.11  | -2.41  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -8.43  | -9.32             | -9.22  | -10.62 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -8.43  | -9.32             | -9.22  | -10.62 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -7.61  | -8.41             | -8.32  | -9.59  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.28  | -0.31             | -0.31  | -0.35  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.32  | -0.35             | -0.35  | -0.40  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.86  | -3.16             | -3.13  | -3.60  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -3.78  | -4.18             | -4.13  | -4.76  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -29.72 | -32.59            | -32.20 | -37.02 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -30.33 | -33.27            | -32.87 | -37.79 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.08  | -5.61             | -5.55  | -6.40  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.40  | -4.86             | -4.81  | -5.55  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.32   | 14.49             | 15.73  | 21.40  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.50   | 11.58             | 12.88  | 18.18  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.50   | 11.58             | 12.88  | 18.18  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.22  | -1.60             | -1.31  | -0.85  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.61   | 3.73              | 3.97   | 5.23   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -17.46 | -17.34            | -16.87 | -18.78 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -17.04 | -16.87            | -16.41 | -18.24 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -17.04 | -16.87            | -16.41 | -18.24 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.19  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.47  | -0.52             | -0.52  | -0.60  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.85  | 26.42             | 27.57  | 35.14  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.30   | 4.16              | 4.35   | 5.56   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.57   | 3.93              | 4.21   | 5.59   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.19   | 5.72              | 5.97   | 7.62   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.99  | -1.09             | -1.08  | -1.25  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.93  | -1.02             | -1.01  | -1.17  |



**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.17  | -1.30             | -1.28  | -1.48  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -1.50  | -1.66             | -1.65  | -1.90  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.36   | 0.68              | 0.71   | 0.91   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.26   | 0.57              | 0.60   | 0.79   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.19  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.75  | -3.04             | -3.01  | -3.47  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.47  | -0.52             | -0.52  | -0.60  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.83  | -2.02             | -2.00  | -2.30  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.84  | -0.93             | -0.92  | -1.06  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -1.86  | -2.06             | -2.03  | -2.34  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.16  | -0.18             | -0.17  | -0.20  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -2.18  | -2.39             | -2.36  | -2.71  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.75  | -4.14             | -4.10  | -4.72  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.68   | 2.98              | 3.10   | 3.96   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -6.79  | -7.50             | -7.42  | -8.55  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -6.79  | -7.50             | -7.42  | -8.55  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.24  | -1.16             | -1.12  | -1.22  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.22  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.26  | -0.28             | -0.28  | -0.32  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.81  | -5.32             | -5.26  | -6.06  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.32  | -3.67             | -3.63  | -4.18  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.08              | 0.08   | 0.11   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.07              | 0.08   | 0.11   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.46  | -0.51             | -0.51  | -0.58  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.91  | -4.32             | -4.27  | -4.92  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.67  | -4.05             | -4.01  | -4.62  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.13  | -5.67             | -5.61  | -6.46  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.52  | -5.00             | -4.95  | -5.70  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.94  | -1.04             | -1.03  | -1.18  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 72.73  | 144.41            | 152.02 | 196.76 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 72.74  | 144.43            | 152.03 | 196.77 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.52  | 19.24             | 20.12  | 25.75  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 9.84   | 18.48             | 19.37  | 24.89  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.15  | -0.17             | -0.16  | -0.19  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.84  | -0.93             | -0.92  | -1.06  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.03  | -1.14             | -1.12  | -1.30  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.03  | -1.14             | -1.12  | -1.30  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.02  | -1.13             | -1.12  | -1.29  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.31   | 4.17              | 4.36   | 5.57   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.37  | -0.41             | -0.41  | -0.47  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -10.14 | -11.20            | -11.08 | -12.77 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -7.82  | -8.64             | -8.55  | -9.85  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -1.91  | -2.11             | -2.08  | -2.40  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.42  | -0.46             | -0.45  | -0.52  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.76  | -0.84             | -0.84  | -0.96  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.79  | -0.87             | -0.86  | -0.99  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.79  | -0.87             | -0.86  | -0.99  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.60  | -0.67             | -0.66  | -0.76  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.24  | -0.27             | -0.27  | -0.31  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.46  | -0.51             | -0.50  | -0.58  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.50  | -0.55             | -0.54  | -0.63  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.50  | -0.55             | -0.54  | -0.63  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.83  | -3.13             | -3.10  | -3.57  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.50  | -8.29             | -8.20  | -9.45  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.58  | -0.64             | -0.63  | -0.73  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.09   | 3.93              | 4.12   | 5.29   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.09   | 3.93              | 4.12   | 5.29   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.10  | -0.11             | -0.10  | -0.12  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.12  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.30  | -0.33             | -0.33  | -0.38  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.30  | -0.33             | -0.33  | -0.38  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.32  | -0.36             | -0.35  | -0.41  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.02  | -5.55             | -5.49  | -6.33  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -3.05  | -3.37             | -3.34  | -3.84  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.99  | -4.41             | -4.36  | -5.03  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.99  | -4.41             | -4.36  | -5.03  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.89  | -0.98             | -0.97  | -1.12  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.28  | -0.31             | -0.31  | -0.36  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.09  | -1.21             | -1.19  | -1.37  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.68  | 25.13             | 26.29  | 33.67  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.15  | -0.17             | -0.17  | -0.19  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.26  | 25.77             | 26.93  | 34.40  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -2.09  | -2.31             | -2.29  | -2.63  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.09  | -2.31             | -2.29  | -2.63  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.09  | -2.31             | -2.29  | -2.63  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.09  | -2.31             | -2.29  | -2.63  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.93  | -1.02             | -1.01  | -1.17  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.58  | -2.86             | -2.83  | -3.26  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -6.10  | -6.59             | -6.50  | -7.44  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -6.17  | -6.66             | -6.57  | -7.52  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.16             | -0.16  | -0.18  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 18.57  | 32.98             | 34.41  | 43.85  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.64  | 35.28             | 36.84  | 47.03  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.04              | 0.05   | 0.07   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.04              | 0.05   | 0.07   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 37.62  | 67.24             | 70.19  | 89.53  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.37  | -0.41             | -0.40  | -0.47  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.31  | -0.34             | -0.33  | -0.39  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.22  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.24   | 48.09             | 53.78  | 76.61  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 60.94  | 110.72            | 115.73 | 147.98 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 60.94  | 110.72            | 115.73 | 147.98 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.19   | 48.04             | 53.72  | 76.54  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 4.19   | 48.04             | 53.73  | 76.55  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.20   | 48.05             | 53.74  | 76.56  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.20   | 48.05             | 53.73  | 76.55  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.24   | 48.09             | 53.78  | 76.61  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.05  | -5.57             | -5.51  | -6.34  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.87  | -5.37             | -5.31  | -6.12  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.42  | -0.46             | -0.46  | -0.53  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.36  | 31.70             | 33.15  | 42.42  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.96  | -1.06             | -1.05  | -1.21  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.96  | -1.06             | -1.05  | -1.21  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.96   | 17.80             | 18.58  | 23.71  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.34  | -0.38             | -0.37  | -0.43  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.48  | -0.53             | -0.53  | -0.61  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -14.52 | -16.05            | -15.88 | -18.30 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.78  | -1.97             | -1.95  | -2.25  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.46  | -0.51             | -0.51  | -0.59  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.23  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.35   | 13.09             | 13.66  | 17.41  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.69  | -1.86             | -1.84  | -2.13  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.14  | -0.16             | -0.16  | -0.18  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.40  | -0.44             | -0.44  | -0.50  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.71   | 8.98              | 9.58   | 12.69  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.16   | 8.37              | 8.98   | 11.99  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.42   | 7.55              | 8.17   | 11.06  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -6.40  | -6.91             | -6.81  | -7.79  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.63  | -5.02             | -4.95  | -5.68  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.21   | 17.55             | 19.05  | 25.92  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.84   | 3.51              | 3.69   | 4.75   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.86   | 3.53              | 3.71   | 4.77   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.73  | -0.80             | -0.79  | -0.91  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.39  | -0.43             | -0.43  | -0.49  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.08             | -0.08  | -0.08  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.68  | -0.75             | -0.74  | -0.86  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.75  | -0.82             | -0.82  | -0.94  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.31  | -0.34             | -0.34  | -0.39  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.43  | -8.21             | -8.12  | -9.36  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.57  | -0.63             | -0.63  | -0.72  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.57  | -0.63             | -0.63  | -0.72  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.45  | -3.82             | -3.78  | -4.35  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.11              | 0.11   | 0.14   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.24  | -2.48             | -2.45  | -2.83  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -53.99 | -53.30            | -51.81 | -57.56 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -27.74 | -25.59            | -24.59 | -26.63 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -54.24 | -53.57            | -52.09 | -57.87 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -54.07 | -53.38            | -51.90 | -57.66 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -53.99 | -53.30            | -51.81 | -57.56 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.28  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.24  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -6.47  | -7.15             | -7.07  | -8.15  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.41  | -0.45             | -0.44  | -0.51  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.79  | -0.87             | -0.86  | -0.99  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.39  | -0.43             | -0.43  | -0.49  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.16  | -0.18             | -0.18  | -0.20  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.34  | -0.37             | -0.37  | -0.42  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.42   | 2.83              | 2.97   | 3.85   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 13.90  | 27.19             | 28.59  | 36.93  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 46.68  | 94.32             | 99.41  | 128.96 |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.68  | 94.32             | 99.41  | 128.96 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 36.17  | 82.70             | 87.92  | 115.71 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 38.01  | 84.73             | 89.93  | 118.03 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -13.89 | -15.36            | -15.19 | -17.50 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.58 | -16.12            | -15.94 | -18.37 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.57 | -16.11            | -15.93 | -18.36 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.30              | 0.31   | 0.40   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.26  | -0.29             | -0.28  | -0.33  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.15  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.63  | -1.81             | -1.79  | -2.06  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.69  | -0.73             | -0.72  | -0.82  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -6.74  | -6.73             | -6.55  | -7.31  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -6.74  | -6.73             | -6.55  | -7.31  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.03  | -5.95             | -5.78  | -6.42  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.03  | -5.95             | -5.78  | -6.42  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.14             | -0.13  | -0.16  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -4.62  | -5.10             | -5.04  | -5.81  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -2.89  | -3.18             | -3.14  | -3.61  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -3.90  | -4.31             | -4.26  | -4.91  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.37  | -0.41             | -0.41  | -0.47  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -3.79  | -4.19             | -4.14  | -4.77  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.28  | -0.31             | -0.31  | -0.35  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.58  | -1.75             | -1.73  | -1.99  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -5.50  | -6.07             | -6.01  | -6.93  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -9.29  | -10.27            | -10.16 | -11.71 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.74  | -1.92             | -1.90  | -2.19  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.74  | -1.92             | -1.90  | -2.19  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -1.74  | -1.92             | -1.90  | -2.19  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.29  | -1.42             | -1.41  | -1.62  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.20  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -3.54  | -2.54             | -2.32  | -2.21  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -1.75  | -1.94             | -1.92  | -2.21  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -1.75  | -1.94             | -1.92  | -2.21  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.05  | -2.26             | -2.24  | -2.58  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 4.49   | 48.37             | 54.06  | 76.92  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.09  | -5.63             | -5.57  | -6.42  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.22  | -1.35             | -1.33  | -1.53  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.41  | -0.45             | -0.44  | -0.51  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.12  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.48              | 0.50   | 0.66   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -5.24  | -5.80             | -5.74  | -6.61  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -4.92  | -5.43             | -5.37  | -6.19  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -4.22  | -1.18             | -0.67  | 0.41   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -4.23  | -1.18             | -0.67  | 0.40   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.09  | -1.03             | -0.52  | 0.58   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.00  | -1.11             | -1.09  | -1.26  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.98   | 5.70              | 5.99   | 7.71   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.90  | 0.85              | 1.26   | 2.44   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.14  | 2.25              | 2.57   | 3.78   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.14  | 2.25              | 2.57   | 3.78   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -2.28  | -2.52             | -2.50  | -2.88  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -13.31 | -14.71            | -14.55 | -16.77 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -13.34 | -14.74            | -14.58 | -16.80 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -13.32 | -14.72            | -14.57 | -16.79 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 52.29  | 110.37            | 116.70 | 152.20 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 52.42  | 110.51            | 116.84 | 152.36 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 52.29  | 110.37            | 116.70 | 152.20 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.53  | 112.85            | 119.15 | 155.03 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -14.95 | -14.82            | -14.41 | -16.04 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -14.95 | -14.82            | -14.41 | -16.04 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -14.95 | -14.82            | -14.41 | -16.04 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -14.95 | -14.81            | -14.41 | -16.03 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -14.95 | -14.81            | -14.41 | -16.03 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.41   | 0.74              | 0.77   | 0.98   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.24  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.64  | -4.02             | -3.98  | -4.58  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.01  | -1.12             | -1.11  | -1.27  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -10.75 | -11.77            | -11.63 | -13.36 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.58  | -1.63             | -1.60  | -1.80  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.50  | -0.55             | -0.55  | -0.63  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.50  | -0.55             | -0.55  | -0.63  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.19             | -0.19  | -0.22  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.21  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -1.97  | -2.18             | -2.16  | -2.48  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.14  | -1.26             | -1.25  | -1.44  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.18  | -1.30             | -1.29  | -1.48  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -4.21  | -4.66             | -4.61  | -5.31  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.66  | -0.73             | -0.72  | -0.83  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 34.17  | 60.74             | 63.37  | 80.77  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -3.45  | -3.81             | -3.77  | -4.34  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.30  | 5.38              | 6.29   | 9.54   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -1.21  | 5.47              | 6.39   | 9.66   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.21  | 5.47              | 6.39   | 9.66   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.85  | -0.94             | -0.93  | -1.07  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.26  | -0.29             | -0.29  | -0.33  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.41  | -0.41             | -0.40  | -0.44  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.41  | -0.41             | -0.40  | -0.44  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.41  | -0.41             | -0.40  | -0.44  |

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.38  | -1.48             | -1.46  | -1.67  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.04             | -0.04  | -0.04  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.15  | -2.37             | -2.34  | -2.70  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.50              | 0.56   | 0.78   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.42   | 0.88              | 0.93   | 1.21   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.40  | -0.44             | -0.43  | -0.50  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.29  | -0.32             | -0.31  | -0.36  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.78  | 29.96             | 31.43  | 40.43  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.35  | -0.38             | -0.38  | -0.44  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.36  | -3.72             | -3.68  | -4.24  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.16  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.09  | -0.07             | -0.06  | -0.07  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.58  | -1.75             | -1.73  | -1.99  |



**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.07  | -1.18             | -1.17  | -1.35  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 61.73  | 111.60            | 116.60 | 148.98 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -2.91  | -3.21             | -3.18  | -3.66  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.14  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.50              | 0.56   | 0.78   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.28  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.54   | 8.08              | 8.43   | 10.75  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.51   | 8.05              | 8.40   | 10.72  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.49   | 8.04              | 8.39   | 10.71  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.61  | -2.89             | -2.86  | -3.29  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -19.27 | -21.29            | -21.06 | -24.27 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -19.23 | -21.25            | -21.02 | -24.23 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -18.93 | -20.92            | -20.70 | -23.85 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.28  | -1.41             | -1.40  | -1.61  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.38  | -0.42             | -0.42  | -0.48  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.58   | 4.80              | 5.03   | 6.46   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.34  | -0.38             | -0.37  | -0.43  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.47   | 12.12             | 12.70  | 16.31  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.47   | 12.12             | 12.70  | 16.31  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-47. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.47  | -1.62             | -1.60  | -1.85  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.92  | -1.02             | -1.00  | -1.16  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.16  | -0.18             | -0.18  | -0.21  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.45  | -0.50             | -0.50  | -0.57  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.90  | -2.10             | -2.08  | -2.40  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -1.46  | -1.62             | -1.60  | -1.85  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -3.65  | -4.03             | -3.99  | -4.59  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.76  | -0.84             | -0.83  | -0.95  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.65  | -0.72             | -0.71  | -0.82  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.81  | -1.93             | -1.93  | -2.19  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.81  | -7.67             | -7.66  | -8.50  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.37  | -7.87             | -7.87  | -8.94  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -3.59  | -3.82             | -3.82  | -4.34  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.28  | -1.37             | -1.37  | -1.56  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.45  | -0.43             | -0.43  | -0.48  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.08              | 0.08   | 0.11   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.17  | -0.14             | -0.14  | -0.14  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.20  | -3.41             | -3.41  | -3.88  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.98  | -4.25             | -4.25  | -4.83  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.98  | -4.25             | -4.25  | -4.83  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.77  | -0.82             | -0.82  | -0.93  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.75  | -0.80             | -0.80  | -0.91  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.58  | -0.62             | -0.62  | -0.70  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.38  | -0.41             | -0.41  | -0.46  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.46  | -1.56             | -1.56  | -1.78  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.59   | 26.49             | 26.83  | 36.13  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.32              | 0.32   | 0.41   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.16  | -1.24             | -1.24  | -1.40  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.37  | -0.40             | -0.40  | -0.45  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.32  | -3.39             | -3.39  | -3.80  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.58  | -3.82             | -3.82  | -4.34  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.14             | -0.14  | -0.16  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -38.93 | -41.56            | -41.59 | -47.26 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -35.52 | -37.92            | -37.95 | -43.12 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -38.96 | -41.59            | -41.62 | -47.29 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.45   | 3.01              | 3.05   | 4.24   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -17.30 | -18.47            | -18.48 | -21.00 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -17.05 | -18.20            | -18.21 | -20.70 |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -17.30 | -18.47            | -18.48 | -21.00 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 142.48 | 262.92            | 265.06 | 335.17 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 142.48 | 262.92            | 265.06 | 335.17 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 70.65  | 131.01            | 132.08 | 167.13 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.27  | -0.28             | -0.28  | -0.32  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.75  | -1.87             | -1.87  | -2.13  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 25.46  | 46.62             | 47.00  | 59.37  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 25.93  | 47.12             | 47.50  | 59.94  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.01  | -7.26             | -7.26  | -8.18  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -7.02  | -7.26             | -7.26  | -8.18  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -7.02  | -7.26             | -7.26  | -8.18  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.81  | -1.93             | -1.93  | -2.19  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -3.45  | -3.03             | -3.02  | -3.23  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -30.68 | -32.09            | -32.10 | -36.27 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -4.46  | -4.76             | -4.77  | -5.41  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.79  | 28.71             | 28.94  | 36.52  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -5.89  | -6.29             | -6.29  | -7.15  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.43  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.76  | 24.86             | 25.07  | 31.93  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.76  | 24.86             | 25.07  | 31.93  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 12.76  | 24.86             | 25.07  | 31.93  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.40  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.25  | -1.34             | -1.34  | -1.52  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.11  | -2.25             | -2.26  | -2.56  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.11  | -2.25             | -2.26  | -2.56  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.11  | -2.25             | -2.26  | -2.56  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -7.30  | -7.79             | -7.80  | -8.86  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -15.15 | -16.18            | -16.19 | -18.39 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -14.71 | -15.71            | -15.72 | -17.86 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.75  | -2.41             | -2.40  | -2.57  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.89  | 48.43             | 49.11  | 67.09  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.89  | 48.43             | 49.11  | 67.09  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.15  | 47.64             | 48.32  | 66.19  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.13  | -1.21             | -1.21  | -1.37  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.57  | -0.61             | -0.61  | -0.69  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.13  | -1.21             | -1.21  | -1.37  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.13  | -1.20             | -1.20  | -1.37  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -13.42 | -14.23            | -14.24 | -16.16 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -13.56 | -14.38            | -14.39 | -16.32 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -12.96 | -13.74            | -13.75 | -15.60 |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -8.80  | -9.16             | -9.17  | -10.34 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.76  | -1.88             | -1.89  | -2.14  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.51  | -1.61             | -1.61  | -1.83  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -5.46  | -5.83             | -5.83  | -6.62  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -17.10 | -18.25            | -18.26 | -20.75 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -17.08 | -18.23            | -18.25 | -20.73 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -15.71 | -16.77            | -16.78 | -19.07 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -15.57 | -16.62            | -16.64 | -18.90 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.93  | -2.98             | -2.98  | -3.34  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -12.10 | -12.92            | -12.93 | -14.69 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -12.10 | -12.92            | -12.93 | -14.69 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -10.92 | -11.66            | -11.66 | -13.25 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.41  | -0.43             | -0.43  | -0.49  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.40  | -0.42             | -0.42  | -0.48  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.97  | -4.24             | -4.24  | -4.82  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.43  | -5.80             | -5.80  | -6.59  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -42.67 | -45.14            | -45.17 | -51.19 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -43.55 | -46.09            | -46.11 | -52.27 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.29  | -7.78             | -7.79  | -8.85  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.32  | -6.74             | -6.75  | -7.67  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 5.63   | 21.17             | 21.46  | 29.03  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.57   | 17.16             | 17.45  | 24.57  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.57   | 17.16             | 17.45  | 24.57  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -3.44  | -0.62             | -0.57  | 0.29   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.74   | 4.91              | 4.96   | 6.58   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -25.18 | -23.81            | -23.78 | -26.07 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -24.58 | -23.17            | -23.13 | -25.34 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -24.58 | -23.17            | -23.13 | -25.34 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.24  | -0.25             | -0.25  | -0.29  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.76  | -0.81             | -0.81  | -0.92  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.72  | 37.74             | 38.04  | 48.02  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.24   | 5.98              | 6.03   | 7.63   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.20   | 5.77              | 5.84   | 7.68   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.46   | 8.18              | 8.25   | 10.42  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.42  | -1.52             | -1.52  | -1.72  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.37  | -1.46             | -1.46  | -1.66  |



**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.69  | -1.80             | -1.80  | -2.05  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -2.20  | -2.35             | -2.35  | -2.67  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.51   | 0.98              | 0.99   | 1.26   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.37   | 0.83              | 0.84   | 1.08   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.95  | -4.22             | -4.22  | -4.80  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.67  | -0.72             | -0.72  | -0.82  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.62  | -2.80             | -2.80  | -3.18  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.21  | -1.29             | -1.29  | -1.47  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -2.67  | -2.85             | -2.85  | -3.24  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.20  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.23  | -0.24             | -0.24  | -0.28  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -3.09  | -3.27             | -3.27  | -3.71  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.38  | -5.75             | -5.75  | -6.54  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.34   | 4.25              | 4.29   | 5.41   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -9.72  | -10.38            | -10.39 | -11.80 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -9.72  | -10.38            | -10.39 | -11.80 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.79  | -1.59             | -1.58  | -1.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.37  | -0.39             | -0.39  | -0.45  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.91  | -7.38             | -7.38  | -8.39  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.76  | -5.08             | -5.09  | -5.78  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.12              | 0.12   | 0.16   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.11              | 0.11   | 0.15   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.66  | -0.71             | -0.71  | -0.81  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.61  | -5.99             | -5.99  | -6.81  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.26  | -5.62             | -5.62  | -6.39  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.36  | -7.86             | -7.87  | -8.94  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -6.51  | -6.95             | -6.95  | -7.90  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.35  | -1.44             | -1.44  | -1.64  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 100.65 | 207.37            | 209.27 | 268.44 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 100.67 | 207.38            | 209.29 | 268.46 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 14.66  | 27.53             | 27.75  | 35.18  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 13.68  | 26.48             | 26.71  | 33.99  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.22  | -1.30             | -1.30  | -1.48  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.48  | -1.58             | -1.58  | -1.79  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.48  | -1.58             | -1.58  | -1.79  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.47  | -1.57             | -1.58  | -1.79  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.25   | 6.00              | 6.05   | 7.64   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.54  | -0.57             | -0.57  | -0.65  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -14.55 | -15.53            | -15.54 | -17.66 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -11.23 | -11.98            | -11.99 | -13.63 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -2.65  | -2.83             | -2.83  | -3.22  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.60  | -0.64             | -0.64  | -0.72  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.31  | -0.34             | -0.34  | -0.38  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.13  | -1.21             | -1.21  | -1.37  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.12  | -1.20             | -1.20  | -1.36  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.12  | -1.20             | -1.20  | -1.36  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.37  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.87  | -0.93             | -0.93  | -1.05  |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.37  | -0.40             | -0.40  | -0.45  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.66  | -0.70             | -0.70  | -0.80  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.71  | -0.76             | -0.76  | -0.86  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.71  | -0.76             | -0.76  | -0.86  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.06  | -4.34             | -4.34  | -4.93  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.77 | -11.49            | -11.50 | -13.07 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.83  | -0.88             | -0.88  | -1.00  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.97   | 5.70              | 5.75   | 7.31   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.97   | 5.70              | 5.75   | 7.31   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.52  | -0.56             | -0.56  | -0.63  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.52  | -0.56             | -0.56  | -0.63  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.55  | -0.59             | -0.59  | -0.67  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.21  | -7.69             | -7.70  | -8.75  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.38  | -4.68             | -4.68  | -5.32  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.72  | -6.11             | -6.11  | -6.95  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.72  | -6.11             | -6.11  | -6.95  |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.27  | -1.36             | -1.36  | -1.55  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.40  | -0.42             | -0.42  | -0.48  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.57  | -1.67             | -1.67  | -1.90  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.14  | 36.06             | 36.36  | 46.10  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.25  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.00  | 36.97             | 37.27  | 47.14  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.08  | -0.08             | -0.09  | -0.10  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -3.00  | -3.20             | -3.20  | -3.64  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.00  | -3.20             | -3.20  | -3.64  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.00  | -3.20             | -3.20  | -3.64  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.00  | -3.20             | -3.20  | -3.64  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.37  | -1.46             | -1.46  | -1.66  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.71  | -3.96             | -3.96  | -4.50  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -8.78  | -9.14             | -9.14  | -10.31 |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.87  | -9.23             | -9.23  | -10.42 |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 25.92  | 47.12             | 47.49  | 59.93  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 27.37  | 50.40             | 50.81  | 64.23  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.09  | -0.09             | -0.09  | -0.11  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.08              | 0.08   | 0.11   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.08              | 0.08   | 0.11   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 52.50  | 96.09             | 96.87  | 122.35 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.53  | -0.57             | -0.57  | -0.65  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.45  | -0.48             | -0.48  | -0.55  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.33   | 71.29             | 72.54  | 103.21 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 85.06  | 158.48            | 159.78 | 202.31 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 85.06  | 158.48            | 159.78 | 202.31 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.25   | 71.20             | 72.45  | 103.11 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3.25   | 71.21             | 72.46  | 103.11 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.27   | 71.23             | 72.48  | 103.14 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.26   | 71.22             | 72.46  | 103.12 |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.33   | 71.29             | 72.54  | 103.21 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -7.24  | -7.72             | -7.72  | -8.77  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.99  | -7.45             | -7.45  | -8.47  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.62  | -0.66             | -0.66  | -0.75  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 24.26  | 45.43             | 45.80  | 58.03  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.37  | -1.47             | -1.47  | -1.67  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.37  | -1.47             | -1.47  | -1.67  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.91  | 25.46             | 25.66  | 32.41  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.47  | -0.50             | -0.50  | -0.57  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.70  | -0.74             | -0.74  | -0.84  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -20.83 | -22.24            | -22.26 | -25.29 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.52  | -2.69             | -2.69  | -3.06  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.67  | -0.71             | -0.71  | -0.81  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.26  | -0.28             | -0.28  | -0.31  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.26  | 18.70             | 18.85  | 23.79  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.42  | -2.59             | -2.59  | -2.94  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.25  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.60  | -0.64             | -0.64  | -0.73  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.05   | 13.00             | 13.14  | 17.27  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.25   | 12.15             | 12.30  | 16.31  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.18   | 11.01             | 11.15  | 15.00  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -9.20  | -9.56             | -9.56  | -10.79 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.66  | -6.96             | -6.96  | -7.86  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.78   | 25.63             | 25.97  | 35.15  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.55   | 5.04              | 5.08   | 6.48   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.58   | 5.06              | 5.11   | 6.51   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.98  | -1.03             | -1.03  | -1.16  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.59  | -0.63             | -0.63  | -0.72  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.19  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.23  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.17  | -0.13             | -0.12  | -0.12  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.97  | -1.04             | -1.04  | -1.18  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.15  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.07  | -1.14             | -1.14  | -1.30  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.46  | -0.49             | -0.49  | -0.56  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.66 | -11.38            | -11.39 | -12.94 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.78  | -0.83             | -0.84  | -0.95  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.78  | -0.83             | -0.83  | -0.95  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.13  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.96  | -5.29             | -5.29  | -6.01  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.15              | 0.15   | 0.20   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.22  | -3.44             | -3.44  | -3.91  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -77.90 | -73.21            | -73.08 | -79.98 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -40.20 | -35.00            | -34.88 | -37.20 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -78.26 | -73.59            | -73.47 | -80.42 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -78.06 | -73.38            | -73.25 | -80.18 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -77.90 | -73.21            | -73.08 | -79.98 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.39  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -9.30  | -9.93             | -9.93  | -11.29 |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.58  | -0.62             | -0.62  | -0.70  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.13  | -1.21             | -1.21  | -1.37  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.56  | -0.60             | -0.60  | -0.68  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.24  | -0.25             | -0.25  | -0.29  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.47  | -0.50             | -0.50  | -0.57  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.89   | 3.97              | 4.01   | 5.16   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.26  | 39.02             | 39.37  | 50.39  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 64.51  | 135.53            | 136.80 | 175.90 |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 64.51  | 135.53            | 136.80 | 175.90 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 49.40  | 119.41            | 120.66 | 157.56 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 52.01  | 122.19            | 123.45 | 160.73 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -19.90 | -21.25            | -21.26 | -24.16 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.92 | -22.33            | -22.34 | -25.39 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -20.90 | -22.31            | -22.33 | -25.37 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.43              | 0.43   | 0.55   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.39  | -0.42             | -0.42  | -0.48  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.21             | -0.22  | -0.24  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.39  | -2.55             | -2.56  | -2.91  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.18  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.89  | -0.90             | -0.90  | -1.01  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -9.72  | -9.25             | -9.23  | -10.15 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.72  | -9.25             | -9.23  | -10.15 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.71  | -8.17             | -8.16  | -8.93  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.71  | -8.17             | -8.16  | -8.93  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.21  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -6.66  | -7.10             | -7.10  | -8.06  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -4.14  | -4.39             | -4.40  | -4.99  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.60  | -5.97             | -5.98  | -6.79  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.55  | -0.59             | -0.59  | -0.67  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.45  | -5.81             | -5.81  | -6.60  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.39  | -0.42             | -0.42  | -0.47  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -2.27  | -2.42             | -2.42  | -2.75  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -7.89  | -8.42             | -8.43  | -9.58  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -13.35 | -14.25            | -14.26 | -16.20 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -2.49  | -2.66             | -2.66  | -3.02  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -2.49  | -2.66             | -2.66  | -3.02  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -2.49  | -2.66             | -2.66  | -3.02  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.81  | -1.93             | -1.93  | -2.20  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -5.17  | -3.37             | -3.34  | -3.13  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.44  | -2.61             | -2.61  | -2.97  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.44  | -2.61             | -2.61  | -2.97  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.86  | -3.05             | -3.05  | -3.47  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3.68   | 71.66             | 72.91  | 103.63 |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -7.31  | -7.81             | -7.81  | -8.88  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.75  | -1.86             | -1.87  | -2.12  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.58  | -0.62             | -0.62  | -0.71  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.18  | -0.20             | -0.20  | -0.22  |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.69              | 0.69   | 0.90   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -7.30  | -7.80             | -7.80  | -8.87  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.06  | -7.53             | -7.54  | -8.56  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -6.30  | -1.28             | -1.18  | 0.33   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -6.30  | -1.28             | -1.18  | 0.32   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.13  | -1.10             | -1.01  | 0.53   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.47  | -1.57             | -1.57  | -1.78  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.19   | 8.23              | 8.30   | 10.58  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.92  | 1.49              | 1.57   | 3.19   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.34  | 3.39              | 3.46   | 5.09   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.34  | 3.39              | 3.46   | 5.09   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -3.02  | -3.23             | -3.23  | -3.67  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -19.11 | -20.40            | -20.42 | -23.20 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -19.14 | -20.43            | -20.45 | -23.23 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -19.13 | -20.42            | -20.44 | -23.22 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 71.93  | 158.83            | 160.39 | 207.41 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 72.13  | 159.04            | 160.60 | 207.65 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 71.93  | 158.83            | 160.39 | 207.41 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 75.18  | 162.29            | 163.85 | 211.35 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -21.66 | -20.46            | -20.43 | -22.39 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -21.66 | -20.46            | -20.43 | -22.39 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -21.66 | -20.46            | -20.43 | -22.39 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -21.66 | -20.46            | -20.42 | -22.39 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -21.66 | -20.46            | -20.42 | -22.39 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.58   | 1.06              | 1.07   | 1.35   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.22  | -5.57             | -5.58  | -6.34  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.45  | -1.55             | -1.55  | -1.77  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -15.42 | -16.28            | -16.29 | -18.46 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.25  | -2.22             | -2.22  | -2.46  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.72  | -0.77             | -0.77  | -0.87  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.72  | -0.77             | -0.77  | -0.87  |

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.30  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -2.83  | -3.02             | -3.02  | -3.43  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.61  | -1.72             | -1.72  | -1.96  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.66  | -1.78             | -1.78  | -2.02  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -6.05  | -6.45             | -6.46  | -7.34  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.99  | -1.05             | -1.05  | -1.20  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 47.70  | 86.78             | 87.47  | 110.39 |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -4.84  | -5.17             | -5.17  | -5.88  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -2.26  | 8.21              | 8.41   | 12.81  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -2.13  | 8.35              | 8.55   | 12.97  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -2.13  | 8.35              | 8.55   | 12.97  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.22  | -1.30             | -1.30  | -1.48  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.39  | -0.42             | -0.42  | -0.48  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.59  | -0.56             | -0.56  | -0.61  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.59  | -0.56             | -0.56  | -0.61  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.59  | -0.56             | -0.56  | -0.61  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.92  | -1.99             | -1.99  | -2.24  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.04             | -0.04  | -0.04  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.08  | -3.28             | -3.28  | -3.73  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.13             | -0.13  | -0.15  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.74              | 0.76   | 1.06   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.67   | 1.36              | 1.37   | 1.76   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.56  | -0.59             | -0.59  | -0.68  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.41  | -0.44             | -0.44  | -0.50  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.92  | 42.93             | 43.31  | 55.20  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.51  | -0.55             | -0.55  | -0.62  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.83  | -5.16             | -5.16  | -5.87  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.13  | -0.09             | -0.09  | -0.09  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.27  | -2.42             | -2.42  | -2.75  |



**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.53  | -1.64             | -1.64  | -1.86  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 86.08  | 159.57            | 160.87 | 203.56 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -4.18  | -4.45             | -4.45  | -5.06  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.74              | 0.76   | 1.06   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.31  | -0.34             | -0.34  | -0.38  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.35   | 11.55             | 11.64  | 14.69  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.29   | 11.51             | 11.60  | 14.65  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.28   | 11.49             | 11.59  | 14.64  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.75  | -4.00             | -4.01  | -4.55  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -27.66 | -29.52            | -29.54 | -33.56 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -27.60 | -29.47            | -29.49 | -33.50 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -27.18 | -29.01            | -29.03 | -32.98 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.79  | -1.91             | -1.91  | -2.17  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.57  | -0.61             | -0.61  | -0.69  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.44   | 6.72              | 6.78   | 8.64   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.50  | -0.54             | -0.54  | -0.61  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.00   | 17.36             | 17.51  | 22.27  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.00   | 17.36             | 17.51  | 22.27  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-48. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Particulate Matter (PM<sub>2.5</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.10  | -2.24             | -2.24  | -2.55  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.38  | -1.47             | -1.47  | -1.67  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.66  | -0.70             | -0.70  | -0.80  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -2.73  | -2.91             | -2.92  | -3.31  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -2.10  | -2.24             | -2.25  | -2.55  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -5.23  | -5.59             | -5.59  | -6.35  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.09  | -1.16             | -1.16  | -1.32  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.92  | -0.98             | -0.98  | -1.12  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.24              | 0.26   | 0.32   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.21   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.93              | 1.02   | 1.25   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.68   | 0.93              | 1.02   | 1.25   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.23  | 14.03             | 15.41  | 18.82  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.03   | 1.42              | 1.56   | 1.90   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.03   | 1.42              | 1.56   | 1.90   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.21   | 3.03              | 3.31   | 4.05   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.21   | 3.03              | 3.31   | 4.05   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.21   | 3.03              | 3.31   | 4.06   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.11   | 0.13   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.18   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.18   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.18   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.18   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.10              | 0.11   | 0.13   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.15   | 0.21              | 0.22   | 0.27   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.28   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.23              | 0.25   | 0.31   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.25              | 0.27   | 0.33   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.25              | 0.27   | 0.33   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.21   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.15   | 0.18   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.16   | 0.22              | 0.24   | 0.29   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.29   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.29   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.44   | 0.61              | 0.67   | 0.81   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.12   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.11   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |



**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.29   | 3.14              | 3.44   | 4.21   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.29   | 3.14              | 3.44   | 4.21   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.17   | 0.21   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.45   | 0.61              | 0.67   | 0.82   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.61              | 0.67   | 0.82   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.03   | 1.42              | 1.56   | 1.90   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.68   | 2.30              | 2.52   | 3.08   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.29              | 0.31   | 0.38   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.39   | 1.92              | 2.08   | 2.55   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.20   | 1.65              | 1.81   | 2.22   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.20   | 1.65              | 1.81   | 2.22   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.39   | 1.92              | 2.08   | 2.56   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.39   | 1.92              | 2.08   | 2.56   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.39   | 1.92              | 2.08   | 2.56   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.39   | 1.92              | 2.08   | 2.56   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.39   | 1.92              | 2.08   | 2.55   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.64   | 0.88              | 0.96   | 1.18   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.24   | 1.71              | 1.87   | 2.29   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.55   | 8.98              | 9.86   | 12.04  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.18   | 0.25              | 0.27   | 0.33   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.52              | 0.54   | 0.68   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.27   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.52              | 0.54   | 0.68   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.38   | 0.52              | 0.54   | 0.68   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.38   | 0.52              | 0.54   | 0.68   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.20   | 0.24   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.37              | 0.40   | 0.49   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.77   | 3.81              | 4.17   | 5.10   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.77   | 3.81              | 4.17   | 5.10   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.81   | 3.85              | 4.22   | 5.16   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.80   | 3.85              | 4.21   | 5.15   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.39   | 1.92              | 2.08   | 2.55   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.29   | 1.77              | 1.94   | 2.37   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.29   | 1.77              | 1.94   | 2.37   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.29   | 1.77              | 1.93   | 2.37   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.87   | 1.19              | 1.31   | 1.60   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.03   | 1.42              | 1.55   | 1.90   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.88   | 1.21              | 1.32   | 1.62   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.88   | 1.21              | 1.32   | 1.62   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.82   | 2.50              | 2.73   | 3.34   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.82   | 2.50              | 2.73   | 3.34   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.82   | 2.50              | 2.73   | 3.34   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.81   | 2.49              | 2.72   | 3.33   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.31              | 0.34   | 0.41   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.28   | 1.76              | 1.93   | 2.36   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.28   | 1.76              | 1.93   | 2.36   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.28   | 1.76              | 1.93   | 2.36   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.64   | 0.88              | 0.97   | 1.18   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.21   | 1.65              | 1.81   | 2.22   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.07   | 1.46              | 1.61   | 1.96   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.07   | 1.46              | 1.61   | 1.96   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.07   | 1.46              | 1.61   | 1.96   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.17   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.55   | 8.98              | 9.86   | 12.05  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.55   | 8.98              | 9.86   | 12.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-49. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.20              | 0.24   | 0.34   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.60   | 0.95              | 1.16   | 1.63   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.51   | 0.81              | 0.98   | 1.38   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.43              | 0.52   | 0.73   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.35              | 0.43   | 0.60   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.28   | 0.44              | 0.53   | 0.75   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.28   | 0.44              | 0.53   | 0.75   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.16              | 0.20   | 0.27   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.13   | 8.08              | 9.94   | 13.58  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.09   | 0.12   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.13              | 0.15   | 0.22   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.39              | 0.47   | 0.66   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.39              | 0.48   | 0.67   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.68   | 4.27              | 5.20   | 7.29   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.45   | 3.90              | 4.74   | 6.65   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.68   | 4.28              | 5.20   | 7.30   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.31   | 5.20              | 6.42   | 8.72   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.19   | 1.90              | 2.31   | 3.24   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.17   | 1.87              | 2.28   | 3.19   |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.19   | 1.90              | 2.31   | 3.24   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 19.63  | 30.80             | 38.03  | 51.56  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.63  | 30.80             | 38.03  | 51.56  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 294.67 | 462.18            | 570.93 | 773.60 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.33   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.79  | 46.72             | 57.71  | 78.20  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 29.75  | 46.66             | 57.64  | 78.10  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.85              | 1.03   | 1.44   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.53   | 0.85              | 1.03   | 1.45   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.53   | 0.85              | 1.03   | 1.45   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.20              | 0.24   | 0.34   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 1.04   | 1.64              | 2.02   | 2.76   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.92   | 4.63              | 5.66   | 7.87   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.31   | 0.49              | 0.59   | 0.83   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.08   | 4.83              | 5.97   | 8.09   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.41   | 0.65              | 0.79   | 1.10   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.93   | 4.60              | 5.68   | 7.71   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.93   | 4.60              | 5.68   | 7.71   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.93   | 4.60              | 5.68   | 7.71   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.23   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.23              | 0.28   | 0.40   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.15   | 0.23              | 0.28   | 0.40   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.23              | 0.28   | 0.40   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.50   | 0.80              | 0.97   | 1.37   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.04   | 1.65              | 2.01   | 2.82   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.01   | 1.60              | 1.95   | 2.73   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.24   | 0.38              | 0.46   | 0.65   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 63.58  | 99.79             | 123.20 | 167.16 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 63.58  | 99.79             | 123.20 | 167.16 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 63.63  | 99.87             | 123.29 | 167.30 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.45   | 2.30              | 2.81   | 3.90   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.46   | 2.31              | 2.83   | 3.92   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.42   | 2.25              | 2.75   | 3.81   |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.63   | 1.00              | 1.21   | 1.70   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.24   | 0.33   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.17              | 0.20   | 0.28   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.12   | 3.33              | 4.10   | 5.59   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.92   | 4.60              | 5.65   | 7.77   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.92   | 4.60              | 5.65   | 7.77   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.82   | 4.45              | 5.47   | 7.51   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.81   | 4.44              | 5.45   | 7.48   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.34              | 0.41   | 0.58   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.87   | 1.38              | 1.68   | 2.36   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.38              | 1.68   | 2.36   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.79   | 1.25              | 1.52   | 2.13   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.08   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.07   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.03   | 3.19              | 3.93   | 5.35   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.11   | 3.32              | 4.10   | 5.58   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.42   | 7.00              | 8.57   | 11.88  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.48   | 7.10              | 8.68   | 12.05  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.84              | 1.03   | 1.44   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.46   | 0.74              | 0.90   | 1.26   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.85   | 7.64              | 9.40   | 12.83  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.19   | 8.18              | 10.07  | 13.76  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.19   | 8.18              | 10.07  | 13.76  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.34   | 5.25              | 6.47   | 8.82   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.80   | 4.40              | 5.43   | 7.37   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.70   | 7.43              | 9.12   | 12.54  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.66   | 7.36              | 9.04   | 12.43  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.66   | 7.36              | 9.04   | 12.43  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.12   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.72  | 19.95             | 24.65  | 33.39  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.13   | 4.90              | 6.06   | 8.21   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.84   | 2.89              | 3.57   | 4.85   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.68   | 2.63              | 3.25   | 4.41   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.16              | 0.19   | 0.27   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |



**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.23   | 0.32   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.15   | 0.24              | 0.29   | 0.40   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.27              | 0.33   | 0.45   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.18   | 0.28              | 0.35   | 0.48   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.27   | 0.43              | 0.53   | 0.74   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.13   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.18   | 0.29              | 0.35   | 0.49   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.08   | 0.13              | 0.16   | 0.23   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.29              | 0.36   | 0.50   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.23   | 0.36              | 0.44   | 0.62   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.37   | 0.59              | 0.72   | 1.01   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.26              | 0.32   | 0.44   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.67   | 1.07              | 1.30   | 1.83   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.67   | 1.07              | 1.30   | 1.83   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.19   | 0.30              | 0.36   | 0.50   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.48   | 0.76              | 0.92   | 1.29   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.33   | 0.52              | 0.64   | 0.89   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.09   | 0.12   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.39   | 0.62              | 0.75   | 1.05   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.36   | 0.58              | 0.70   | 0.99   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.51   | 0.81              | 0.98   | 1.38   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.45   | 0.71              | 0.87   | 1.21   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.25   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 66.02  | 103.61            | 127.93 | 173.54 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 66.02  | 103.61            | 127.93 | 173.54 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.16   | 4.96              | 6.12   | 8.30   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.23   | 5.07              | 6.25   | 8.49   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.22   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.16              | 0.20   | 0.28   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.16              | 0.20   | 0.28   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.16              | 0.20   | 0.27   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.13   | 4.90              | 6.06   | 8.21   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.00   | 1.60              | 1.94   | 2.73   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.77   | 1.23              | 1.50   | 2.10   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.19   | 0.31              | 0.37   | 0.53   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.11   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.06   | 0.10              | 0.12   | 0.16   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.06   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.09   | 0.12   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.45              | 0.54   | 0.76   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.74   | 1.18              | 1.44   | 2.02   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.06   | 0.09              | 0.11   | 0.16   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.15   | 4.94              | 6.10   | 8.27   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.15   | 4.94              | 6.10   | 8.27   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.79              | 0.96   | 1.35   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.30   | 0.48              | 0.58   | 0.82   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.39   | 0.63              | 0.76   | 1.07   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.63              | 0.76   | 1.07   |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.17              | 0.21   | 0.29   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.84  | 20.14             | 24.88  | 33.73  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.79  | 20.05             | 24.77  | 33.57  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.21   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.21   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.33              | 0.40   | 0.56   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.33              | 0.40   | 0.56   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.41              | 0.50   | 0.70   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.62   | 0.99              | 1.21   | 1.70   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.63   | 1.01              | 1.23   | 1.72   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 29.75  | 46.66             | 57.64  | 78.11  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 48.30  | 75.75             | 93.57  | 126.79 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.02   | 9.44              | 11.66  | 15.81  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 40.28  | 63.32             | 78.05  | 106.31 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 34.69  | 54.42             | 67.21  | 91.11  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 34.69  | 54.42             | 67.21  | 91.11  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 40.28  | 63.33             | 78.06  | 106.32 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 40.28  | 63.33             | 78.06  | 106.32 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 40.28  | 63.33             | 78.06  | 106.32 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 40.28  | 63.33             | 78.06  | 106.32 |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 40.28  | 63.32             | 78.05  | 106.31 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.80              | 0.97   | 1.36   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.48   | 0.77              | 0.94   | 1.31   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.41  | 28.88             | 35.67  | 48.35  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.26   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.15              | 0.18   | 0.26   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 35.84  | 56.21             | 69.43  | 94.08  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.06              | 0.07   | 0.09   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.13   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.44   | 2.29              | 2.79   | 3.91   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.28              | 0.35   | 0.48   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.09   | 0.12   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 188.56 | 295.73            | 365.33 | 495.00 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.27              | 0.32   | 0.45   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.08   | 1.71              | 2.10   | 2.88   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.14   | 1.80              | 2.21   | 3.03   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.21   | 1.91              | 2.35   | 3.22   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.66   | 1.05              | 1.27   | 1.79   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.47   | 0.75              | 0.92   | 1.29   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.18   | 8.16              | 10.05  | 13.72  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.22   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.13   | 0.18   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.73   | 1.17              | 1.42   | 2.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.16   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.16   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.54              | 0.66   | 0.93   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.35              | 0.43   | 0.60   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.97  | 17.36             | 21.26  | 29.39  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 4.45   | 7.07              | 8.63   | 12.01  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.00  | 17.41             | 21.33  | 29.48  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 10.98  | 17.38             | 21.29  | 29.42  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.97  | 17.36             | 21.26  | 29.39  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.64   | 1.02              | 1.24   | 1.74   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.77   | 5.91              | 7.30   | 9.89   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.75   | 12.16             | 15.01  | 20.38  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 79.91  | 125.37            | 154.82 | 209.93 |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 79.91  | 125.37            | 154.82 | 209.93 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 80.94  | 127.02            | 156.83 | 212.75 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 80.76  | 126.73            | 156.48 | 212.25 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.38   | 2.19              | 2.67   | 3.74   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.44   | 2.30              | 2.80   | 3.92   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.44   | 2.30              | 2.80   | 3.92   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.25              | 0.31   | 0.43   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.00   | 4.73              | 5.82   | 7.95   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.00   | 4.73              | 5.82   | 7.95   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.93   | 4.62              | 5.68   | 7.76   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.93   | 4.62              | 5.68   | 7.76   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.47   | 0.75              | 0.91   | 1.28   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.29   | 0.47              | 0.57   | 0.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.39   | 0.61              | 0.75   | 1.05   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.60              | 0.73   | 1.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.25              | 0.30   | 0.43   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.54   | 0.87              | 1.05   | 1.48   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.92   | 1.46              | 1.78   | 2.50   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.17   | 0.27              | 0.33   | 0.47   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.27              | 0.33   | 0.47   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.17   | 0.27              | 0.33   | 0.47   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.13   | 0.21              | 0.25   | 0.35   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.55   | 0.88              | 1.07   | 1.50   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.28              | 0.35   | 0.49   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.18   | 0.28              | 0.35   | 0.49   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.21   | 0.33              | 0.40   | 0.57   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 40.25  | 63.28             | 78.00  | 106.24 |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.50   | 0.80              | 0.98   | 1.37   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.33   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.53   | 0.84              | 1.03   | 1.44   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.49   | 0.77              | 0.94   | 1.32   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 37.11  | 58.23             | 71.90  | 97.51  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 37.11  | 58.23             | 71.90  | 97.51  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 37.09  | 58.20             | 71.87  | 97.46  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.19   | 0.26   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 25.06  | 39.30             | 48.55  | 65.79  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 29.78  | 46.72             | 57.69  | 78.23  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 25.36  | 39.79             | 49.14  | 66.62  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 25.36  | 39.79             | 49.14  | 66.62  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.24   | 0.38              | 0.47   | 0.65   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.31   | 2.10              | 2.55   | 3.58   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.32   | 2.10              | 2.56   | 3.59   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.32   | 2.10              | 2.55   | 3.58   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 52.46  | 82.35             | 101.65 | 137.97 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 52.45  | 82.33             | 101.63 | 137.94 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 52.46  | 82.35             | 101.65 | 137.97 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 52.24  | 82.00             | 101.22 | 137.37 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 4.86   | 7.66              | 9.42   | 12.92  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.86   | 7.66              | 9.42   | 12.92  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.86   | 7.66              | 9.42   | 12.92  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.86   | 7.66              | 9.41   | 12.91  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.86   | 7.66              | 9.41   | 12.91  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.07   | 1.67              | 2.06   | 2.80   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.36   | 0.57              | 0.70   | 0.98   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.16              | 0.19   | 0.27   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1.08   | 1.72              | 2.10   | 2.94   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.18   | 0.28              | 0.34   | 0.48   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.13   |

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.19   | 0.31              | 0.38   | 0.53   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.18              | 0.22   | 0.31   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.19              | 0.23   | 0.32   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.42   | 0.66              | 0.81   | 1.13   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.06   | 0.10              | 0.12   | 0.17   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.44   | 10.10             | 12.48  | 16.91  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.35   | 0.55              | 0.67   | 0.94   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 36.96  | 57.99             | 71.61  | 97.13  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 36.95  | 57.98             | 71.59  | 97.11  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 36.95  | 57.98             | 71.59  | 97.11  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.08   | 0.13              | 0.16   | 0.23   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.15   | 0.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.24              | 0.29   | 0.41   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.34   | 0.53              | 0.66   | 0.89   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.34              | 0.41   | 0.58   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.05   | 0.08   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.56  | 29.12             | 35.97  | 48.76  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.07   | 0.09   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.53              | 0.64   | 0.90   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.25              | 0.30   | 0.43   |



**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.17              | 0.21   | 0.29   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 34.72  | 54.46             | 67.27  | 91.17  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.40   | 0.64              | 0.78   | 1.08   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.10   | 0.14   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.73  | 48.20             | 59.55  | 80.68  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.74  | 48.21             | 59.56  | 80.70  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.74  | 48.22             | 59.56  | 80.70  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.26   | 0.41              | 0.50   | 0.70   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.90   | 3.04              | 3.70   | 5.18   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.90   | 3.03              | 3.69   | 5.17   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.87   | 2.98              | 3.63   | 5.09   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.13   | 0.20              | 0.25   | 0.35   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.72   | 4.26              | 5.26   | 7.13   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.09   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 188.64 | 295.87            | 365.50 | 495.24 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 188.64 | 295.87            | 365.50 | 495.24 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-50. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.23              | 0.28   | 0.39   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.17   | 0.24   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.09   | 0.12   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.19   | 0.30              | 0.36   | 0.51   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.14   | 0.23              | 0.28   | 0.39   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.36   | 0.57              | 0.70   | 0.98   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.12              | 0.14   | 0.20   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.10              | 0.12   | 0.18   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.66              | 0.68   | 0.89   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.79   | 3.20              | 3.31   | 4.29   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.51   | 2.71              | 2.80   | 3.63   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.80   | 1.43              | 1.48   | 1.92   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.47              | 0.49   | 0.63   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.17              | 0.18   | 0.23   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.66   | 1.18              | 1.22   | 1.58   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.82   | 1.47              | 1.52   | 1.97   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.82   | 1.47              | 1.52   | 1.97   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.16   | 0.28              | 0.29   | 0.38   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.28              | 0.29   | 0.37   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.23              | 0.24   | 0.31   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.14              | 0.15   | 0.19   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.30   | 0.54              | 0.56   | 0.72   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.33  | 27.18             | 28.33  | 36.13  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.32   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.42              | 0.44   | 0.57   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.72   | 1.30              | 1.34   | 1.74   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.74   | 1.32              | 1.36   | 1.77   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.00   | 14.30             | 14.80  | 19.18  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.30   | 13.05             | 13.51  | 17.50  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.00   | 14.31             | 14.81  | 19.20  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.12   | 0.15   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.90   | 17.53             | 18.30  | 23.25  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.03   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.55   | 6.35              | 6.58   | 8.53   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.50   | 6.26              | 6.48   | 8.40   |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.55   | 6.35              | 6.58     | 8.53     |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 58.66  | 103.78            | 108.40   | 137.59   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 58.66  | 103.78            | 108.40   | 137.59   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 880.60 | 1,557.71          | 1,627.30 | 2,064.69 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03     | 0.04     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.10              | 0.10     | 0.13     |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.36   | 0.64              | 0.67     | 0.86     |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06     | 0.07     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 89.01  | 157.45            | 164.48   | 208.69   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 88.91  | 157.27            | 164.30   | 208.46   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.59   | 2.84              | 2.94     | 3.80     |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.59   | 2.84              | 2.94     | 3.81     |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.59   | 2.84              | 2.94     | 3.81     |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.37   | 0.66              | 0.68     | 0.89     |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02     | 0.03     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 3.12   | 5.53              | 5.76     | 7.35     |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.71   | 15.53             | 16.12    | 20.78    |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.92   | 1.64              | 1.69     | 2.20     |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.21   | 16.28             | 17.01    | 21.58    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.21   | 2.17              | 2.24     | 2.91     |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02     | 0.02     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.75   | 15.50             | 16.18  | 20.55  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.75   | 15.50             | 16.18  | 20.55  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 8.75   | 15.50             | 16.18  | 20.55  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.16   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.26   | 0.46              | 0.48   | 0.62   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.03   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43   | 0.78              | 0.80   | 1.04   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.43   | 0.78              | 0.80   | 1.04   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.78              | 0.80   | 1.04   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.50   | 2.68              | 2.78   | 3.60   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.10   | 5.55              | 5.75   | 7.45   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.01   | 5.38              | 5.57   | 7.22   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.71   | 1.28              | 1.32   | 1.71   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 190.00 | 336.24            | 351.13 | 445.89 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 190.00 | 336.24            | 351.13 | 445.89 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 190.15 | 336.51            | 351.41 | 446.25 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.42              | 0.43   | 0.56   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.19              | 0.20   | 0.26   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.42              | 0.43   | 0.56   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.23   | 0.41              | 0.43   | 0.55   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.33   | 7.71              | 8.01   | 10.30  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.36   | 7.76              | 8.06   | 10.37  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.24   | 7.54              | 7.84   | 10.08  |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.87   | 3.34              | 3.46   | 4.49   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.36   | 0.65              | 0.67   | 0.87   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.31   | 0.56              | 0.57   | 0.74   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.32   | 11.20             | 11.68  | 14.88  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 8.71   | 15.48             | 16.11  | 20.62  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.71   | 15.47             | 16.10  | 20.61  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.43   | 14.97             | 15.59  | 19.94  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 8.40   | 14.92             | 15.53  | 19.87  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.64   | 1.14              | 1.18   | 1.53   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.59   | 4.62              | 4.79   | 6.20   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.59   | 4.62              | 4.79   | 6.20   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.34   | 4.19              | 4.34   | 5.62   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.15              | 0.16   | 0.20   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.17              | 0.18   | 0.23   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.05   | 10.71             | 11.17  | 14.22  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.32   | 11.19             | 11.67  | 14.87  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 13.19  | 23.49             | 24.39  | 31.40  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 13.37  | 23.82             | 24.73  | 31.83  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.58   | 2.82              | 2.92   | 3.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.38   | 2.47              | 2.55   | 3.31   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 14.50  | 25.70             | 26.80  | 34.15  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.52  | 27.53             | 28.69  | 36.60  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.52  | 27.53             | 28.69  | 36.60  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.84   | 17.44             | 18.19  | 23.17  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.42   | 14.90             | 15.56  | 19.76  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 14.05  | 24.97             | 25.98  | 33.27  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 13.93  | 24.75             | 25.75  | 32.97  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 13.93  | 24.75             | 25.75  | 32.97  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.03              | 0.03   | 0.03   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.25              | 0.26   | 0.34   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 38.01  | 67.24             | 70.25  | 89.13  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 9.34   | 16.52             | 17.25  | 21.89  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.49   | 9.73              | 10.15  | 12.91  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.02   | 8.87              | 9.27   | 11.76  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.29   | 0.52              | 0.54   | 0.70   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.49              | 0.50   | 0.65   |



**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.35   | 0.62              | 0.64   | 0.83   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.44   | 0.79              | 0.82   | 1.06   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.51   | 0.90              | 0.94   | 1.20   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.54   | 0.95              | 0.99   | 1.26   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.81   | 1.45              | 1.50   | 1.95   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.14   | 0.25              | 0.26   | 0.34   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.54   | 0.96              | 1.00   | 1.29   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.25   | 0.44              | 0.46   | 0.60   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.55   | 0.98              | 1.02   | 1.32   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.07   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.11   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.67   | 1.20              | 1.24   | 1.61   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.11   | 1.98              | 2.05   | 2.65   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.09              | 0.10   | 0.13   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.50   | 0.88              | 0.92   | 1.16   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 2.00   | 3.58              | 3.70   | 4.80   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 2.00   | 3.58              | 3.70   | 4.80   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.56   | 0.99              | 1.03   | 1.33   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.42   | 2.54              | 2.63   | 3.40   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.98   | 1.75              | 1.81   | 2.35   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.18              | 0.19   | 0.24   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.18              | 0.19   | 0.24   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.14   | 0.24              | 0.25   | 0.33   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.15   | 2.06              | 2.13   | 2.76   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.08   | 1.93              | 2.00   | 2.59   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.51   | 2.71              | 2.80   | 3.63   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.33   | 2.39              | 2.47   | 3.20   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.28   | 0.50              | 0.51   | 0.66   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 197.30 | 349.13            | 364.61 | 462.94 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 197.29 | 349.12            | 364.61 | 462.94 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.44   | 16.71             | 17.45  | 22.16  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 9.65   | 17.07             | 17.83  | 22.64  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.44              | 0.46   | 0.60   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.54              | 0.56   | 0.73   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.30   | 0.54              | 0.56   | 0.73   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.30   | 0.54              | 0.56   | 0.72   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 9.33   | 16.51             | 17.25  | 21.89  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.20              | 0.20   | 0.26   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.99   | 5.34              | 5.53   | 7.17   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.31   | 4.12              | 4.27   | 5.53   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.56   | 1.00              | 1.04   | 1.35   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.22              | 0.23   | 0.29   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.11              | 0.12   | 0.15   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.40              | 0.42   | 0.54   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.23   | 0.41              | 0.43   | 0.56   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.41              | 0.43   | 0.56   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.32              | 0.33   | 0.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.24              | 0.25   | 0.32   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.15   | 0.26              | 0.27   | 0.35   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.26              | 0.27   | 0.35   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.09              | 0.10   | 0.13   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.83   | 1.49              | 1.55   | 2.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.22   | 3.96              | 4.10   | 5.32   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.17   | 0.30              | 0.31   | 0.41   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.40   | 16.63             | 17.37  | 22.04  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.40   | 16.63             | 17.37  | 22.04  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.16              | 0.16   | 0.21   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.16              | 0.16   | 0.21   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.17              | 0.18   | 0.23   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.48   | 2.65              | 2.74   | 3.55   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.90   | 1.61              | 1.66   | 2.16   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.18   | 2.10              | 2.18   | 2.82   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.18   | 2.10              | 2.18   | 2.82   |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.47              | 0.48   | 0.63   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.32   | 0.57              | 0.60   | 0.77   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 38.36  | 67.87             | 70.89  | 89.96  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.11   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 38.19  | 67.56             | 70.57  | 89.55  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.62   | 1.10              | 1.14   | 1.48   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.62   | 1.10              | 1.14   | 1.48   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.62   | 1.10              | 1.14   | 1.48   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.62   | 1.10              | 1.14   | 1.48   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.49              | 0.50   | 0.65   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 1.36              | 1.41   | 1.83   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.87   | 3.33              | 3.45   | 4.47   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.89   | 3.37              | 3.49   | 4.52   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 88.91  | 157.28            | 164.30 | 208.46 |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 144.33 | 255.31            | 266.72 | 338.41 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.99  | 31.83             | 33.25  | 42.19  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.19              | 0.20   | 0.26   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.16              | 0.17   | 0.22   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 120.38 | 213.28            | 222.51 | 283.21 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 103.65 | 183.36            | 191.53 | 243.06 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 103.65 | 183.36            | 191.53 | 243.06 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 120.40 | 213.31            | 222.54 | 283.25 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 120.40 | 213.31            | 222.54 | 283.24 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 120.39 | 213.30            | 222.53 | 283.24 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 120.40 | 213.31            | 222.53 | 283.24 |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 120.38 | 213.28            | 222.51   | 283.21   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.49   | 2.67              | 2.76     | 3.58     |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.44   | 2.57              | 2.66     | 3.45     |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.22              | 0.23     | 0.30     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 55.01  | 97.32             | 101.66   | 129.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.50              | 0.52     | 0.68     |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.28   | 0.50              | 0.52     | 0.68     |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 107.09 | 189.44            | 197.90   | 251.09   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.18              | 0.19     | 0.24     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.26              | 0.26     | 0.34     |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.28   | 7.66              | 7.92     | 10.27    |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.94              | 0.97     | 1.26     |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.24              | 0.25     | 0.33     |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.10              | 0.10     | 0.13     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 563.48 | 996.75            | 1,041.28 | 1,321.13 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.50   | 0.89              | 0.92     | 1.19     |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.08              | 0.08     | 0.10     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.21              | 0.22     | 0.28     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.24   | 5.74              | 5.98   | 7.64   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.40   | 6.03              | 6.28   | 8.03   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.62   | 6.43              | 6.69   | 8.56   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.96   | 3.51              | 3.63   | 4.70   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.41   | 2.52              | 2.61   | 3.38   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.49  | 27.47             | 28.63  | 36.51  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.19              | 0.20   | 0.26   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.18              | 0.19   | 0.25   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.42              | 0.43   | 0.56   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.21              | 0.21   | 0.28   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.36              | 0.37   | 0.48   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.06   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.22   | 0.39              | 0.41   | 0.53   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.16              | 0.17   | 0.22   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.19   | 3.92              | 4.05   | 5.25   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.30              | 0.31   | 0.41   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.30              | 0.31   | 0.40   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.02   | 1.82              | 1.88   | 2.44   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.17              | 0.18   | 0.22   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.66   | 1.18              | 1.22   | 1.59   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 32.75  | 58.28             | 60.56  | 77.79  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 13.29  | 23.71             | 24.59  | 31.72  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 32.84  | 58.46             | 60.75  | 78.02  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 32.79  | 58.36             | 60.65  | 77.90  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 32.75  | 58.28             | 60.56  | 77.79  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.16              | 0.17   | 0.22   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.13   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.91   | 3.41              | 3.53   | 4.57   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.16   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.21              | 0.22   | 0.29   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.42              | 0.43   | 0.56   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.21              | 0.21   | 0.28   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.18              | 0.18   | 0.24   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.27  | 19.94             | 20.83  | 26.43  |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 23.15  | 40.98             | 42.79  | 54.35  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 238.78 | 422.48            | 441.27 | 560.12 |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 238.78 | 422.48            | 441.27 | 560.12 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 241.88 | 428.02            | 447.01 | 567.55 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 241.34 | 427.05            | 446.01 | 566.26 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.10   | 7.32              | 7.58   | 9.83   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.30   | 7.69              | 7.96   | 10.31  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.30   | 7.68              | 7.95   | 10.31  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.09   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.86              | 0.89   | 1.16   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.39              | 0.40   | 0.52   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.97   | 15.90             | 16.58  | 21.15  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.97   | 15.90             | 16.58  | 21.15  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.76   | 15.53             | 16.19  | 20.65  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.76   | 15.53             | 16.19  | 20.65  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.09   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.41   | 2.52              | 2.61   | 3.38   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.87   | 1.56              | 1.61   | 2.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.15   | 2.06              | 2.13   | 2.76   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.20              | 0.20   | 0.26   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.12   | 2.01              | 2.08   | 2.69   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.20   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.47   | 0.83              | 0.86   | 1.12   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.62   | 2.90              | 3.00   | 3.89   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.74   | 4.90              | 5.07   | 6.57   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.51   | 0.92              | 0.95   | 1.23   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.51   | 0.92              | 0.95   | 1.23   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.51   | 0.92              | 0.95   | 1.23   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.38   | 0.68              | 0.70   | 0.91   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.11   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.65   | 2.95              | 3.05   | 3.95   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.52   | 0.92              | 0.96   | 1.24   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.52   | 0.92              | 0.96   | 1.24   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.60   | 1.08              | 1.12   | 1.45   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 120.31 | 213.15            | 222.37 | 283.03 |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.50   | 2.69              | 2.78   | 3.61   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.36   | 0.64              | 0.66   | 0.86   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.21              | 0.22   | 0.29   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.55   | 2.77              | 2.86   | 3.71   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.45   | 2.59              | 2.68   | 3.48   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 110.90 | 196.22            | 204.94 | 260.16 |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 110.90 | 196.22            | 204.94 | 260.16 |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 110.86 | 196.14            | 204.86 | 260.06 |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.53              | 0.55   | 0.71   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 74.87  | 132.44            | 138.36 | 175.55 |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 88.98  | 157.43            | 164.44 | 208.72 |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 75.79  | 134.09            | 140.06 | 177.76 |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 75.79  | 134.09            | 140.06 | 177.76 |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.67   | 1.20              | 1.25   | 1.62   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.92   | 7.02              | 7.26   | 9.41   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.93   | 7.03              | 7.28   | 9.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.93   | 7.02              | 7.27   | 9.42   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 156.77 | 277.46            | 289.73 | 367.99 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 156.74 | 277.40            | 289.66 | 367.89 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 156.77 | 277.46            | 289.73 | 367.99 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 156.11 | 276.28            | 288.51 | 366.40 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 14.53  | 25.80             | 26.86  | 34.34  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 14.53  | 25.80             | 26.86  | 34.34  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 14.53  | 25.80             | 26.86  | 34.34  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 14.53  | 25.80             | 26.86  | 34.34  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.53  | 25.80             | 26.86  | 34.34  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.18   | 5.63              | 5.88   | 7.46   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.13   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.07   | 1.92              | 1.99   | 2.58   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.30   | 0.53              | 0.55   | 0.72   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.22   | 5.76              | 5.96   | 7.73   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.52   | 0.93              | 0.96   | 1.24   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.26              | 0.27   | 0.35   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.15   | 0.26              | 0.27   | 0.35   |

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.06   | 0.07   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.58   | 1.04              | 1.08   | 1.39   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.34   | 0.60              | 0.62   | 0.81   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.62              | 0.64   | 0.83   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.24   | 2.22              | 2.30   | 2.98   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.19   | 0.35              | 0.36   | 0.47   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 19.25  | 34.05             | 35.57  | 45.13  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.02   | 1.82              | 1.88   | 2.44   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 110.44 | 195.42            | 204.10 | 259.12 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 110.41 | 195.38            | 204.05 | 259.06 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 110.41 | 195.38            | 204.05 | 259.06 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.25   | 0.45              | 0.46   | 0.60   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.23   | 0.41              | 0.43   | 0.55   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.23   | 0.41              | 0.43   | 0.55   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.23   | 0.41              | 0.43   | 0.55   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.44   | 0.79              | 0.82   | 1.06   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.01   | 1.79              | 1.87   | 2.37   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.64   | 1.14              | 1.18   | 1.53   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.28              | 0.29   | 0.38   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.10              | 0.11   | 0.14   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.21              | 0.22   | 0.28   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.15              | 0.16   | 0.20   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 55.48  | 98.15             | 102.52 | 130.12 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.18              | 0.19   | 0.25   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.99   | 1.77              | 1.84   | 2.38   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.83              | 0.86   | 1.12   |



**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.56              | 0.58     | 0.76     |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 103.75 | 183.54            | 191.72   | 243.29   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.20   | 2.13              | 2.21     | 2.85     |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06     | 0.08     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.28              | 0.29     | 0.38     |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01     | 0.01     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.12              | 0.12     | 0.16     |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 91.85  | 162.47            | 169.73   | 215.34   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 91.86  | 162.49            | 169.75   | 215.38   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 91.87  | 162.50            | 169.76   | 215.39   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.77   | 1.38              | 1.43     | 1.85     |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.68   | 10.16             | 10.52    | 13.63    |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.67   | 10.14             | 10.50    | 13.61    |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.59   | 9.99              | 10.34    | 13.40    |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.38   | 0.67              | 0.70     | 0.90     |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.21     | 0.27     |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.13   | 14.38             | 15.02    | 19.07    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.18              | 0.19     | 0.24     |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 563.74 | 997.21            | 1,041.76 | 1,321.76 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 563.74 | 997.21            | 1,041.76 | 1,321.76 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-51. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.43   | 0.77              | 0.80   | 1.04   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.27   | 0.48              | 0.50   | 0.65   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.24              | 0.25   | 0.32   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.56   | 1.00              | 1.04   | 1.34   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.43   | 0.77              | 0.80   | 1.04   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.08   | 1.92              | 1.99   | 2.58   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.22   | 0.40              | 0.41   | 0.53   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.34              | 0.35   | 0.46   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.53   | 0.96              | 0.96   | 1.23   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.53   | 4.63              | 4.64   | 5.93   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.15   | 3.92              | 3.93   | 5.02   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.14   | 2.07              | 2.08   | 2.65   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.37   | 0.68              | 0.68   | 0.87   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.28              | 0.28   | 0.36   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.93   | 1.71              | 1.71   | 2.19   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.16   | 2.13              | 2.13   | 2.72   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.16   | 2.13              | 2.13   | 2.72   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.22   | 0.41              | 0.41   | 0.53   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.40              | 0.40   | 0.51   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.33              | 0.33   | 0.42   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.20   | 0.26   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.78              | 0.78   | 1.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.42  | 38.86             | 39.16  | 49.42  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.34              | 0.34   | 0.43   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.62              | 0.62   | 0.79   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.20   | 0.25   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.03   | 1.88              | 1.88   | 2.41   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.05   | 1.91              | 1.91   | 2.45   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 11.34  | 20.73             | 20.77  | 26.53  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.34  | 18.91             | 18.95  | 24.20  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.34  | 20.74             | 20.79  | 26.55  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.16              | 0.16   | 0.21   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.80  | 24.99             | 25.22  | 31.74  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 5.04   | 9.21              | 9.23   | 11.79  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.97   | 9.08              | 9.10   | 11.62  |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.04     | 9.21              | 9.23     | 11.79    |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 81.66    | 147.83            | 149.21   | 187.67   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 81.66    | 147.83            | 149.21   | 187.67   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,225.53 | 2,218.09          | 2,239.20 | 2,815.48 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03     | 0.05              | 0.05     | 0.06     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08     | 0.14              | 0.14     | 0.18     |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51     | 0.93              | 0.93     | 1.19     |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04     | 0.08              | 0.08     | 0.10     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 123.87   | 224.19            | 226.33   | 284.58   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 123.73   | 223.94            | 226.08   | 284.26   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.25     | 4.11              | 4.12     | 5.26     |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.25     | 4.11              | 4.12     | 5.26     |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.25     | 4.11              | 4.12     | 5.26     |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.53     | 0.96              | 0.96     | 1.23     |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02     | 0.04              | 0.04     | 0.05     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 4.37     | 7.94              | 8.00     | 10.10    |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.30    | 22.43             | 22.52    | 28.65    |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 1.30     | 2.37              | 2.38     | 3.04     |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.81    | 23.18             | 23.40    | 29.43    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.72     | 3.14              | 3.14     | 4.02     |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01     | 0.02              | 0.02     | 0.02     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.19              | 0.19   | 0.24   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.15   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.20  | 22.08             | 22.29  | 28.04  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.20  | 22.08             | 22.29  | 28.04  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 12.20  | 22.08             | 22.29  | 28.04  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.17              | 0.18   | 0.22   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.36   | 0.67              | 0.67   | 0.85   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.61   | 1.12              | 1.13   | 1.44   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.61   | 1.12              | 1.13   | 1.44   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.61   | 1.12              | 1.13   | 1.44   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.13   | 3.89              | 3.89   | 4.97   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.41   | 8.07              | 8.08   | 10.32  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.28   | 7.83              | 7.85   | 10.02  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.01   | 1.85              | 1.85   | 2.37   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 264.63 | 479.15            | 483.56 | 608.41 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 264.63 | 479.15            | 483.56 | 608.41 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 264.84 | 479.54            | 483.95 | 608.91 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.17   | 0.30              | 0.30   | 0.39   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.10   | 11.11             | 11.16  | 14.18  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.14   | 11.18             | 11.24  | 14.27  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.96   | 10.87             | 10.92  | 13.86  |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.66   | 4.86              | 4.87   | 6.22   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51   | 0.94              | 0.94   | 1.20   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.44   | 0.80              | 0.81   | 1.03   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.83   | 16.01             | 16.14  | 20.35  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 12.22  | 22.20             | 22.35  | 28.28  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 12.21  | 22.20             | 22.34  | 28.27  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.81  | 21.47             | 21.61  | 27.33  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 11.77  | 21.39             | 21.54  | 27.24  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.16   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.91   | 1.66              | 1.66   | 2.12   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.66   | 6.70              | 6.71   | 8.57   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.66   | 6.70              | 6.71   | 8.57   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.32   | 6.07              | 6.08   | 7.76   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.22              | 0.22   | 0.28   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.22              | 0.22   | 0.28   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.39   | 15.21             | 15.34  | 19.33  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.82   | 15.99             | 16.12  | 20.33  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 18.58  | 33.86             | 34.01  | 43.22  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 18.84  | 34.33             | 34.48  | 43.82  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.24   | 4.09              | 4.10   | 5.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.95   | 3.57              | 3.58   | 4.57   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 20.25  | 36.73             | 37.03  | 46.71  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.70  | 39.38             | 39.68  | 50.09  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.70  | 39.38             | 39.68  | 50.09  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.37  | 24.23             | 24.43  | 30.80  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.86  | 21.47             | 21.66  | 27.26  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 19.71  | 35.83             | 36.06  | 45.64  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 19.53  | 35.51             | 35.73  | 45.23  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 19.53  | 35.51             | 35.73  | 45.23  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.16   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.40              | 0.40   | 0.52   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 52.91  | 95.76             | 96.67  | 121.54 |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 12.99  | 23.50             | 23.73  | 29.83  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.64   | 13.84             | 13.96  | 17.58  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.98   | 12.63             | 12.75  | 16.03  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.41   | 0.76              | 0.76   | 0.97   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.73              | 0.73   | 0.93   |



**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.49   | 0.90              | 0.90   | 1.15   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.64   | 1.17              | 1.17   | 1.50   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.71   | 1.28              | 1.29   | 1.62   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.75   | 1.36              | 1.37   | 1.72   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.12              | 0.12   | 0.15   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.15   | 2.10              | 2.11   | 2.69   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.36              | 0.36   | 0.46   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.76   | 1.40              | 1.40   | 1.79   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.35   | 0.64              | 0.65   | 0.82   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.78   | 1.42              | 1.42   | 1.82   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.16   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.94   | 1.72              | 1.72   | 2.20   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.57   | 2.87              | 2.87   | 3.67   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.69   | 1.25              | 1.26   | 1.59   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 2.83   | 5.18              | 5.19   | 6.62   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 2.83   | 5.18              | 5.19   | 6.63   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.79   | 1.43              | 1.44   | 1.83   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.11   | 0.20              | 0.20   | 0.25   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.01   | 3.68              | 3.69   | 4.71   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.39   | 2.54              | 2.54   | 3.25   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.26              | 0.26   | 0.33   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.26              | 0.27   | 0.33   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.35              | 0.35   | 0.45   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.63   | 2.99              | 2.99   | 3.82   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.53   | 2.80              | 2.81   | 3.59   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.14   | 3.92              | 3.93   | 5.02   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.89   | 3.46              | 3.47   | 4.43   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.39   | 0.72              | 0.72   | 0.92   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 274.75 | 497.44            | 502.04 | 631.59 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 274.74 | 497.43            | 502.04 | 631.58 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.16              | 0.16   | 0.20   |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 13.15  | 23.80             | 24.03  | 30.22  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 13.43  | 24.32             | 24.55  | 30.89  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.36   | 0.65              | 0.65   | 0.83   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.43   | 0.79              | 0.79   | 1.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.43   | 0.79              | 0.79   | 1.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.43   | 0.79              | 0.79   | 1.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 12.98  | 23.50             | 23.72  | 29.83  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.16   | 0.29              | 0.29   | 0.37   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 4.24   | 7.74              | 7.76   | 9.91   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 3.27   | 5.98              | 5.99   | 7.65   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.77   | 1.41              | 1.41   | 1.81   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.17   | 0.32              | 0.32   | 0.41   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.21   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.16              | 0.16   | 0.21   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.25   | 0.46              | 0.46   | 0.59   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.20              | 0.20   | 0.25   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.35              | 0.35   | 0.45   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.38              | 0.38   | 0.48   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.38              | 0.38   | 0.48   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.03              | 0.03   | 0.03   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.18   | 2.16              | 2.17   | 2.77   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.14   | 5.74              | 5.76   | 7.35   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.24   | 0.44              | 0.44   | 0.56   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 13.06  | 23.65             | 23.87  | 30.02  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.06  | 23.65             | 23.87  | 30.02  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.28              | 0.28   | 0.36   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.15   | 0.28              | 0.28   | 0.36   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.29              | 0.29   | 0.38   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.10   | 3.84              | 3.84   | 4.91   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.28   | 2.33              | 2.34   | 2.99   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.67   | 3.05              | 3.05   | 3.90   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.67   | 3.05              | 3.05   | 3.90   |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.37   | 0.68              | 0.68   | 0.87   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.21              | 0.21   | 0.27   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.08   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.46   | 0.83              | 0.84   | 1.07   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 53.37  | 96.61             | 97.52  | 122.63 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 53.12  | 96.15             | 97.06  | 122.05 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.87   | 1.60              | 1.60   | 2.04   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.87   | 1.60              | 1.60   | 2.04   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.87   | 1.60              | 1.60   | 2.04   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.87   | 1.60              | 1.60   | 2.04   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.73              | 0.73   | 0.93   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.08   | 1.98              | 1.98   | 2.53   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.65   | 4.84              | 4.85   | 6.20   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.68   | 4.89              | 4.90   | 6.26   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 123.74 | 223.95            | 226.08 | 284.26 |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 200.88 | 363.57            | 367.03 | 461.49 |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.04  | 45.33             | 45.76  | 57.54  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.28              | 0.28   | 0.36   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.13   | 0.24              | 0.24   | 0.31   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.15   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 168.06 | 304.63            | 307.19 | 387.16 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 144.23 | 261.07            | 263.54 | 331.41 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 144.23 | 261.07            | 263.54 | 331.41 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 168.08 | 304.68            | 307.23 | 387.22 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 168.08 | 304.68            | 307.23 | 387.21 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 168.07 | 304.66            | 307.22 | 387.20 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 168.08 | 304.67            | 307.23 | 387.21 |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 168.06 | 304.63            | 307.19   | 387.16   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.11   | 3.87              | 3.87     | 4.95     |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.04   | 3.73              | 3.74     | 4.77     |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.33              | 0.33     | 0.42     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 76.55  | 138.56            | 139.87   | 175.88   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.40   | 0.73              | 0.73     | 0.94     |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.40   | 0.73              | 0.73     | 0.94     |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 149.04 | 269.74            | 272.31   | 342.39   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.25              | 0.25     | 0.32     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.37              | 0.37     | 0.47     |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 6.07   | 11.09             | 11.11    | 14.20    |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.73   | 1.34              | 1.35     | 1.72     |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.35              | 0.36     | 0.45     |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.14              | 0.14     | 0.18     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 784.19 | 1,419.29          | 1,432.81 | 1,801.53 |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.71   | 1.29              | 1.29     | 1.65     |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.11              | 0.11     | 0.14     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.17   | 0.32              | 0.32     | 0.41     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.53   | 8.23              | 8.28   | 10.47  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.76   | 8.65              | 8.71   | 11.01  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.07   | 9.22              | 9.28   | 11.74  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.78   | 5.08              | 5.09   | 6.51   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.00   | 3.66              | 3.66   | 4.68   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 21.65  | 39.28             | 39.59  | 49.96  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.28              | 0.28   | 0.36   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.27              | 0.27   | 0.34   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.31   | 0.56              | 0.57   | 0.72   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.31              | 0.32   | 0.40   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.11   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.52              | 0.52   | 0.66   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.08   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.31   | 0.57              | 0.57   | 0.73   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.24              | 0.24   | 0.31   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.11   | 5.68              | 5.69   | 7.27   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.42              | 0.42   | 0.53   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.42              | 0.42   | 0.53   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.06              | 0.06   | 0.07   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.44   | 2.64              | 2.64   | 3.38   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.24              | 0.24   | 0.31   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.94   | 1.71              | 1.72   | 2.19   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.06  | 83.86             | 84.30  | 106.95 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 18.79  | 34.28             | 34.40  | 43.79  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 46.20  | 84.12             | 84.55  | 107.28 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 46.14  | 84.01             | 84.44  | 107.14 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 46.06  | 83.86             | 84.30  | 106.95 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.13   | 0.24              | 0.24   | 0.30   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.71   | 4.95              | 4.96   | 6.34   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.21   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.17              | 0.17   | 0.21   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.31              | 0.31   | 0.39   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.77   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.16   | 0.30              | 0.30   | 0.38   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.16   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.25              | 0.25   | 0.32   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.71  | 28.44             | 28.71  | 36.10  |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 32.25  | 58.40             | 58.93  | 74.16  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 332.44 | 601.81            | 607.44 | 764.02 |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 332.44 | 601.81            | 607.44 | 764.02 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 336.84 | 609.85            | 615.50 | 774.32 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 336.08 | 608.46            | 614.11 | 772.54 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 5.80   | 10.60             | 10.62  | 13.56  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.09   | 11.14             | 11.16  | 14.25  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.09   | 11.13             | 11.15  | 14.24  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.21              | 0.21   | 0.27   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.70   | 1.27              | 1.28   | 1.63   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.28   | 0.51              | 0.51   | 0.65   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.54  | 22.75             | 22.92  | 28.94  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12.54  | 22.75             | 22.92  | 28.94  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.24  | 22.22             | 22.39  | 28.26  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.24  | 22.22             | 22.39  | 28.26  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.01   | 3.67              | 3.68   | 4.69   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 1.23   | 2.25              | 2.26   | 2.88   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.63   | 2.98              | 2.99   | 3.81   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.29              | 0.29   | 0.37   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.59   | 2.91              | 2.92   | 3.73   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.11   | 0.21              | 0.21   | 0.27   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.66   | 1.21              | 1.21   | 1.55   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 2.30   | 4.20              | 4.21   | 5.37   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.89   | 7.11              | 7.12   | 9.09   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.73   | 1.33              | 1.33   | 1.70   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.73   | 1.33              | 1.33   | 1.70   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.73   | 1.33              | 1.33   | 1.70   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.53   | 0.96              | 0.97   | 1.23   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 2.34   | 4.27              | 4.28   | 5.47   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.71   | 1.30              | 1.30   | 1.67   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.71   | 1.30              | 1.30   | 1.67   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.83   | 1.52              | 1.52   | 1.95   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 167.95 | 304.45            | 307.00 | 386.92 |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.13   | 3.90              | 3.91   | 4.99   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51   | 0.93              | 0.93   | 1.19   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.31              | 0.31   | 0.40   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.12   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.13   | 3.89              | 3.90   | 4.98   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.05   | 3.76              | 3.76   | 4.81   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 154.41 | 279.54            | 282.15 | 354.90 |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 154.41 | 279.54            | 282.15 | 354.90 |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 154.36 | 279.45            | 282.06 | 354.79 |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.43   | 0.78              | 0.78   | 1.00   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 104.19 | 188.57            | 190.36 | 239.36 |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 123.88 | 224.27            | 226.37 | 284.72 |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 105.51 | 190.98            | 192.78 | 242.45 |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 105.51 | 190.98            | 192.78 | 242.45 |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.88   | 1.61              | 1.61   | 2.06   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.56   | 10.18             | 10.20  | 13.02  |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.57   | 10.19             | 10.21  | 13.04  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.57   | 10.19             | 10.21  | 13.04  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 218.39 | 395.47            | 399.08 | 502.18 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 218.33 | 395.36            | 398.98 | 502.05 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 218.39 | 395.47            | 399.08 | 502.18 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 217.45 | 393.74            | 397.35 | 499.97 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 20.38  | 37.03             | 37.28  | 47.14  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 20.38  | 37.03             | 37.28  | 47.14  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 20.38  | 37.03             | 37.28  | 47.14  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 20.38  | 37.02             | 37.28  | 47.13  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 20.38  | 37.02             | 37.28  | 47.13  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.43   | 8.02              | 8.09   | 10.18  |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.52   | 2.78              | 2.79   | 3.56   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.42   | 0.77              | 0.78   | 0.99   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 4.56   | 8.34              | 8.36   | 10.67  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.72   | 1.32              | 1.33   | 1.69   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.21   | 0.38              | 0.38   | 0.49   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.21   | 0.38              | 0.38   | 0.49   |

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.82   | 1.51              | 1.51   | 1.93   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.47   | 0.86              | 0.86   | 1.10   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.48   | 0.89              | 0.89   | 1.13   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.76   | 3.22              | 3.23   | 4.12   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.29   | 0.52              | 0.53   | 0.67   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 26.79  | 48.49             | 48.95  | 61.55  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.41   | 2.58              | 2.58   | 3.30   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 153.78 | 278.42            | 281.01 | 353.50 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 153.75 | 278.35            | 280.94 | 353.41 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 153.75 | 278.35            | 280.94 | 353.41 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.36   | 0.65              | 0.65   | 0.83   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.21              | 0.21   | 0.27   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.76   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.76   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.33   | 0.60              | 0.60   | 0.76   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.61   | 1.11              | 1.12   | 1.42   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.40   | 2.54              | 2.57   | 3.23   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.90   | 1.65              | 1.65   | 2.11   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.41              | 0.41   | 0.52   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.13   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.30              | 0.30   | 0.38   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.12   | 0.22              | 0.22   | 0.28   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 77.23  | 139.80            | 141.12 | 177.48 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.27              | 0.27   | 0.35   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.41   | 2.57              | 2.58   | 3.29   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.12              | 0.12   | 0.16   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.66   | 1.21              | 1.21   | 1.55   |



**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.45   | 0.82              | 0.82     | 1.04     |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 144.40 | 261.38            | 263.85   | 331.79   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.69   | 3.07              | 3.09     | 3.93     |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.41              | 0.41     | 0.52     |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01     | 0.02     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.17              | 0.17     | 0.21     |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 127.82 | 231.34            | 233.54   | 293.64   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 127.84 | 231.38            | 233.58   | 293.69   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 127.85 | 231.39            | 233.59   | 293.71   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.09   | 2.00              | 2.00     | 2.55     |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.06   | 14.73             | 14.76    | 18.85    |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.04   | 14.70             | 14.73    | 18.82    |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.92   | 14.48             | 14.51    | 18.53    |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.52   | 0.95              | 0.96     | 1.22     |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.30              | 0.30     | 0.39     |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.36  | 20.56             | 20.76    | 26.10    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.27              | 0.27     | 0.34     |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 784.55 | 1,419.96          | 1,433.48 | 1,802.39 |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 784.55 | 1,419.96          | 1,433.48 | 1,802.39 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-52. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Sulfur Dioxide (SO<sub>2</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.61   | 1.12              | 1.12   | 1.43   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.40   | 0.73              | 0.74   | 0.94   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.07   | 0.13              | 0.13   | 0.17   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.35              | 0.35   | 0.45   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.79   | 1.45              | 1.46   | 1.86   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.61   | 1.12              | 1.12   | 1.43   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.52   | 2.79              | 2.79   | 3.57   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.32   | 0.58              | 0.58   | 0.74   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.49              | 0.49   | 0.63   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.37   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.16   | 1.37              | 1.36   | 1.75   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.98   | 1.16              | 1.15   | 1.49   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.49   | 0.58              | 0.58   | 0.75   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.26   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.51              | 0.51   | 0.66   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.54   | 0.64              | 0.63   | 0.82   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.54   | 0.64              | 0.63   | 0.82   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.12              | 0.12   | 0.16   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.30   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.91   | 6.30              | 6.62   | 8.26   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.47   | 0.56              | 0.55   | 0.71   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.57              | 0.57   | 0.73   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.23   | 6.18              | 6.13   | 7.91   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.77   | 5.65              | 5.60   | 7.22   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.23   | 6.19              | 6.13   | 7.91   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.51   | 0.63              | 0.64   | 0.81   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.33   | 2.76              | 2.73   | 3.53   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.29   | 2.72              | 2.69   | 3.47   |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.33   | 2.76              | 2.73   | 3.53   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.97   | 6.69              | 7.23   | 8.89   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.97   | 6.69              | 7.23   | 8.89   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.75   | 7.79              | 8.47   | 10.38  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.27   | 0.35   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.38   | 1.89              | 2.06   | 2.52   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.32   | 1.81              | 1.98   | 2.42   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.00   | 1.19              | 1.18   | 1.52   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.00   | 1.19              | 1.18   | 1.52   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.00   | 1.19              | 1.18   | 1.52   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.37   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.57   | 0.67              | 0.67   | 0.86   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.21   | 4.98              | 4.93   | 6.36   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.59   | 0.70              | 0.70   | 0.90   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.12   | 1.53              | 1.68   | 2.05   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.79   | 0.93              | 0.92   | 1.19   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.05   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.66   | 0.85              | 0.89   | 1.11   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.66   | 0.85              | 0.89   | 1.11   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.66   | 0.85              | 0.89   | 1.11   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.25   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.43   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.43   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.43   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.97   | 1.15              | 1.14   | 1.47   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.01   | 2.37              | 2.35   | 3.03   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.94   | 2.29              | 2.27   | 2.93   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.71   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.07  | 12.84             | 13.43  | 16.81  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.07  | 12.84             | 13.43  | 16.81  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.16  | 12.95             | 13.54  | 16.96  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.18              | 0.17   | 0.22   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.81   | 2.14              | 2.12   | 2.74   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.17              | 2.15   | 2.77   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.75   | 2.07              | 2.06   | 2.65   |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.21   | 1.43              | 1.41   | 1.83   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.28              | 0.28   | 0.36   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.20   | 0.24              | 0.24   | 0.30   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.73   | 0.86              | 0.85   | 1.10   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.28   | 2.69              | 2.67   | 3.44   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.28   | 2.69              | 2.66   | 3.44   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.10   | 2.48              | 2.45   | 3.17   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.07   | 2.45              | 2.43   | 3.14   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.42   | 0.50              | 0.50   | 0.64   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 1.92              | 1.91   | 2.46   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.62   | 1.92              | 1.91   | 2.46   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.47   | 1.74              | 1.72   | 2.22   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.56   | 0.67              | 0.66   | 0.85   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.72   | 0.85              | 0.85   | 1.09   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 5.88   | 6.97              | 6.92   | 8.92   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.00   | 7.11              | 7.06   | 9.10   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.98   | 1.15              | 1.14   | 1.48   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.85   | 1.00              | 0.99   | 1.28   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.84   | 3.53              | 3.62   | 4.58   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.45   | 4.26              | 4.34   | 5.51   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.45   | 4.26              | 4.34   | 5.51   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.47   | 1.77              | 1.78   | 2.28   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.37   | 0.47              | 0.49   | 0.61   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.07   | 4.84              | 4.82   | 6.20   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.99   | 4.75              | 4.73   | 6.08   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.99   | 4.75              | 4.73   | 6.08   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.13   | 2.92              | 3.20   | 3.90   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.15   | 0.21              | 0.22   | 0.27   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.85   | 1.10              | 1.16   | 1.45   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.52   | 0.71              | 0.78   | 0.95   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.22              | 0.22   | 0.29   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.26   |



**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.26   | 0.34   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.29   | 0.34              | 0.33   | 0.43   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.20   | 0.27              | 0.29   | 0.35   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.21   | 0.29              | 0.31   | 0.38   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.53   | 0.62              | 0.62   | 0.80   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.35   | 0.41              | 0.41   | 0.53   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.16   | 0.19              | 0.19   | 0.24   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.36   | 0.42              | 0.42   | 0.54   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.44   | 0.52              | 0.51   | 0.66   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.72   | 0.85              | 0.84   | 1.08   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.24   | 0.33              | 0.36   | 0.44   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.30   | 1.54              | 1.53   | 1.97   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.30   | 1.54              | 1.52   | 1.97   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.31   | 0.37              | 0.37   | 0.48   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.92   | 1.09              | 1.08   | 1.39   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.64   | 0.75              | 0.74   | 0.96   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.75   | 0.89              | 0.88   | 1.14   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.70   | 0.83              | 0.83   | 1.07   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.99   | 1.17              | 1.15   | 1.49   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.86   | 1.02              | 1.01   | 1.31   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.27   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 14.41  | 18.93             | 20.18  | 25.00  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.40  | 18.93             | 20.18  | 24.99  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.27   | 1.71              | 1.86   | 2.28   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.40   | 1.87              | 2.01   | 2.48   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.24   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.30   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.30   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.23              | 0.23   | 0.29   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.27   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.11   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.94   | 2.29              | 2.27   | 2.93   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.50   | 1.77              | 1.75   | 2.26   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.38   | 0.45              | 0.45   | 0.58   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.16   | 0.21   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.17   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.55   | 0.65              | 0.64   | 0.83   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.46   | 1.73              | 1.72   | 2.22   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.35   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.35   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.05   | 0.07   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.14              | 1.13   | 1.45   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.58   | 0.69              | 0.68   | 0.88   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.76   | 0.90              | 0.89   | 1.15   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.76   | 0.90              | 0.89   | 1.15   |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.26   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.24   | 0.32   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.38   | 3.21              | 3.48   | 4.27   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.27   | 3.08              | 3.36   | 4.11   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.40   | 0.47              | 0.47   | 0.60   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.40   | 0.47              | 0.47   | 0.60   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.40   | 0.47              | 0.47   | 0.60   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.40   | 0.47              | 0.47   | 0.60   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.26   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.58   | 0.75   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.21   | 1.43              | 1.41   | 1.82   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.22   | 1.44              | 1.43   | 1.85   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.32   | 1.81              | 1.98   | 2.42   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.97   | 4.04              | 4.41   | 5.40   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.40   | 1.89              | 2.06   | 2.52   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.11   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.88  | 18.23             | 18.53  | 23.57  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.08   | 5.46              | 5.88   | 7.24   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 4.08   | 5.46              | 5.88   | 7.24   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 14.89  | 18.24             | 18.54  | 23.58  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 14.89  | 18.24             | 18.54  | 23.58  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 14.89  | 18.23             | 18.54  | 23.57  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 14.89  | 18.24             | 18.54  | 23.58  |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 14.88  | 18.23             | 18.53  | 23.57  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.97   | 1.15              | 1.13   | 1.46   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.93   | 1.10              | 1.09   | 1.41   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.50   | 3.37              | 3.66   | 4.49   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.21   | 0.28   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.18   | 0.22              | 0.21   | 0.28   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.16   | 4.33              | 4.73   | 5.78   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.78   | 3.29              | 3.26   | 4.21   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.41              | 0.41   | 0.53   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.10   | 0.13   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.62   | 0.85              | 0.93   | 1.14   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.49   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.06   | 1.32              | 1.36   | 1.72   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.16   | 1.45              | 1.49   | 1.88   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.30   | 1.61              | 1.65   | 2.09   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.27   | 1.51              | 1.49   | 1.92   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.92   | 1.08              | 1.07   | 1.38   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.01   | 6.42              | 6.73   | 8.41   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.19              | 0.18   | 0.24   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.11   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.20   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.22   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.43   | 1.69              | 1.68   | 2.17   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.13   | 0.17   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.67   | 0.79              | 0.79   | 1.01   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.11   | 0.14   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43   | 0.51              | 0.50   | 0.65   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.46  | 16.16             | 16.19  | 20.75  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7.77   | 9.38              | 9.43   | 12.07  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13.51  | 16.21             | 16.24  | 20.83  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.47  | 16.17             | 16.20  | 20.77  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.46  | 16.16             | 16.19  | 20.75  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.24   | 1.46              | 1.45   | 1.87   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.23   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.46              | 0.49   | 0.60   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.08   | 2.71              | 2.88   | 3.58   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.00   | 10.35             | 10.92  | 13.61  |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.00   | 10.35             | 10.92  | 13.61  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 10.00  | 12.72             | 13.27  | 16.63  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.64   | 12.29             | 12.85  | 16.09  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.67   | 3.15              | 3.12   | 4.03   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.80   | 3.31              | 3.27   | 4.23   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.79   | 3.30              | 3.27   | 4.22   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.35              | 0.35   | 0.45   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.18              | 0.18   | 0.24   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.52   | 1.80              | 1.78   | 2.30   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.52   | 1.80              | 1.78   | 2.30   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.38   | 1.64              | 1.62   | 2.09   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.38   | 1.64              | 1.62   | 2.09   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.90   | 1.07              | 1.06   | 1.37   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.57   | 0.68              | 0.68   | 0.87   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.75   | 0.88              | 0.87   | 1.13   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.74   | 0.88              | 0.87   | 1.12   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.35   | 0.46   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.05   | 1.24              | 1.23   | 1.59   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.78   | 2.10              | 2.08   | 2.68   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.50   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.50   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.50   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.07   | 1.27              | 1.25   | 1.62   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.35   | 0.42              | 0.42   | 0.54   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.35   | 0.42              | 0.42   | 0.54   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.41   | 0.49              | 0.49   | 0.63   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 14.83  | 18.17             | 18.47  | 23.49  |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.98   | 1.16              | 1.15   | 1.48   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.27   | 0.35   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.04   | 1.24              | 1.22   | 1.58   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.94   | 1.12              | 1.11   | 1.43   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.34   | 2.86              | 2.91   | 3.70   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.34   | 2.86              | 2.91   | 3.70   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.30   | 2.82              | 2.87   | 3.65   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.28   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.66   | 0.88              | 0.95   | 1.17   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.08   | 2.63              | 2.73   | 3.43   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.25   | 1.58              | 1.64   | 2.06   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.25   | 1.58              | 1.64   | 2.06   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.49   | 0.58              | 0.57   | 0.74   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.55   | 3.02              | 2.99   | 3.86   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.56   | 3.02              | 3.00   | 3.87   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.55   | 3.02              | 2.99   | 3.86   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.57   | 9.44              | 9.72   | 12.27  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.55   | 9.41              | 9.69   | 12.24  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.57   | 9.44              | 9.72   | 12.27  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.15   | 8.94              | 9.22   | 11.63  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.46   | 4.12              | 4.10   | 5.28   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.46   | 4.12              | 4.10   | 5.28   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.46   | 4.12              | 4.10   | 5.28   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.46   | 4.12              | 4.10   | 5.28   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.46   | 4.12              | 4.10   | 5.28   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.11   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.70   | 0.83              | 0.82   | 1.06   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.19   | 0.23              | 0.23   | 0.29   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.09   | 2.48              | 2.45   | 3.17   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.34   | 0.40              | 0.40   | 0.52   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.14   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.14   |

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.38   | 0.45              | 0.44   | 0.57   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.34   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.35   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.81   | 0.95              | 0.94   | 1.22   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.18   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.18   | 2.99              | 3.27   | 3.99   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.68   | 0.80              | 0.79   | 1.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 5.36   | 6.94              | 7.33   | 9.12   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 5.35   | 6.92              | 7.30   | 9.10   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 5.35   | 6.92              | 7.30   | 9.10   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.16   | 0.19              | 0.19   | 0.25   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.27   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.27   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.27   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.34              | 0.34   | 0.44   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.41   | 0.49              | 0.48   | 0.62   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.12   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.79   | 3.72              | 4.00   | 4.93   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.64   | 0.76              | 0.75   | 0.97   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.36              | 0.35   | 0.46   |



**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.31   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.90   | 5.25              | 5.67   | 6.97   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.56   | 0.66              | 0.66   | 0.85   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.34              | 0.38   | 0.46   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.36              | 0.39   | 0.48   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.36              | 0.40   | 0.48   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.50   | 0.59              | 0.59   | 0.76   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.69   | 4.36              | 4.32   | 5.58   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.68   | 4.35              | 4.31   | 5.57   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.63   | 4.29              | 4.25   | 5.48   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.25   | 0.30              | 0.30   | 0.38   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.11   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.28              | 0.30   | 0.37   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.79   | 1.05              | 1.13   | 1.39   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.79   | 1.05              | 1.13   | 1.39   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-53. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.43   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.19   | 0.25   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.13   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.36   | 0.43              | 0.43   | 0.55   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.42   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.70   | 0.83              | 0.82   | 1.05   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.22   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.19   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 55.21  | 79.31             | 80.68  | 104.76   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 266.89 | 383.23            | 389.53 | 505.72   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 226.00 | 324.50            | 329.84 | 428.23   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 110.90 | 159.29            | 162.03 | 210.40   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 39.38  | 56.55             | 57.48  | 74.62    |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.31  | 19.11             | 19.43  | 25.23    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.83   | 2.63              | 2.67   | 3.47     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.52  | 17.98             | 18.28  | 23.73    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 98.49  | 141.44            | 143.83 | 186.76   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 122.56 | 176.00            | 178.96 | 232.36   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 122.56 | 176.00            | 178.96 | 232.36   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 23.58  | 33.86             | 34.42  | 44.70    |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 23.07  | 33.12             | 33.67  | 43.71    |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 18.74  | 26.92             | 27.38  | 35.56    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.13   | 1.63              | 1.66   | 2.16     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.73  | 16.84             | 17.12  | 22.23    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 44.98  | 64.60             | 65.68  | 85.29    |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 595.68 | 865.49            | 905.82 | 1,184.60 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.36     | 6.64              | 7.74     | 10.38    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.49    | 50.96             | 51.79    | 67.24    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.38    | 16.35             | 16.61    | 21.57    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 108.16   | 155.30            | 157.86   | 204.95   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 110.12   | 158.13            | 160.76   | 208.73   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.15     | 5.96              | 6.05     | 7.86     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.74     | 1.07              | 1.09     | 1.41     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.50     | 3.58              | 3.64     | 4.73     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,195.09 | 1,716.13          | 1,744.70 | 2,265.22 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,090.47 | 1,565.92          | 1,592.01 | 2,066.98 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,196.04 | 1,717.50          | 1,746.09 | 2,267.02 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.56     | 13.73             | 13.96    | 18.12    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 92.42    | 133.19            | 136.63   | 177.79   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.00     | 2.88              | 2.93     | 3.81     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 531.15   | 762.75            | 775.53   | 1,006.93 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 523.11   | 751.21            | 763.79   | 991.69   |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 531.15 | 762.75            | 775.53   | 1,006.93 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 284.46 | 424.85            | 473.93   | 629.16   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 284.46 | 424.85            | 473.93   | 629.16   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 258.23 | 391.09            | 449.63   | 600.92   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.56   | 3.68              | 3.74     | 4.85     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.15   | 11.70             | 11.89    | 15.44    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 53.70  | 77.11             | 78.38    | 101.76   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.59   | 6.58              | 6.69     | 8.69     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 52.89  | 81.00             | 95.33    | 128.05   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 37.94  | 59.54             | 73.52    | 99.73    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 225.26 | 323.53            | 329.07   | 427.30   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 225.65 | 324.10            | 329.65   | 428.05   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 225.65 | 324.10            | 329.65   | 428.05   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 55.21  | 79.31             | 80.68    | 104.76   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.84   | 2.65              | 2.69     | 3.50     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 130.31 | 187.14            | 190.29   | 247.08   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 966.55 | 1,387.88          | 1,410.79 | 1,831.63 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 136.58 | 196.12            | 199.34   | 258.80   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 32.64  | 51.15             | 62.98    | 85.39    |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.19              | 0.19     | 0.25     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 180.86 | 259.70            | 263.98   | 342.72   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.51   | 2.17              | 2.20     | 2.86     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.75    | 15.44             | 15.69    | 20.37    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.31     | 9.06              | 9.21     | 11.95    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 78.39    | 113.95            | 119.39   | 156.18   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 78.39    | 113.95            | 119.39   | 156.18   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 78.39    | 113.95            | 119.39   | 156.18   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 10.07    | 14.45             | 14.69    | 19.07    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 38.44    | 55.19             | 56.10    | 72.84    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.88     | 4.14              | 4.21     | 5.46     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 64.78    | 93.02             | 94.55    | 122.75   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 64.78    | 93.02             | 94.55    | 122.75   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 64.78    | 93.02             | 94.55    | 122.75   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 223.89   | 321.47            | 326.76   | 424.23   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 462.37   | 663.91            | 674.84   | 876.13   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 447.81   | 643.00            | 653.59   | 848.54   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 106.25   | 152.58            | 155.13   | 201.42   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,312.98 | 1,904.42          | 1,984.85 | 2,593.07 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,312.98 | 1,904.42          | 1,984.85 | 2,593.07 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,335.40 | 1,936.61          | 2,017.57 | 2,635.55 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.72    | 49.85             | 50.67    | 65.79    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.10    | 21.68             | 22.04    | 28.61    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.72    | 49.85             | 50.67    | 65.79    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 34.28    | 49.22             | 50.03    | 64.95    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 415.11   | 596.08            | 605.97   | 786.75   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 419.74   | 602.73            | 612.73   | 795.52   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 401.38   | 576.37            | 585.93   | 760.73   |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 278.42   | 399.78            | 406.35   | 527.56   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 54.13    | 77.73             | 79.01    | 102.58   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 46.35    | 66.56             | 67.65    | 87.83    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 166.84   | 239.56            | 243.50   | 316.13   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 523.87   | 752.22            | 764.60   | 992.66   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 523.38   | 751.50            | 763.87   | 991.72   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 481.98   | 692.06            | 703.45   | 913.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 477.18   | 685.17            | 696.44   | 904.18   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.26     | 10.43             | 10.60    | 13.76    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 95.20    | 136.73            | 139.07   | 180.59   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 371.43   | 533.37            | 542.25   | 704.02   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 371.43   | 533.37            | 542.25   | 704.02   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 335.34   | 481.55            | 489.57   | 635.63   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.85    | 18.48             | 18.87    | 24.53    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.68    | 22.54             | 23.00    | 29.89    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13     | 0.19              | 0.19     | 0.25     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 128.24   | 184.14            | 187.17   | 243.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 166.17   | 238.60            | 242.53   | 314.87   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,328.60 | 1,908.16          | 1,940.70 | 2,519.96 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,355.79 | 1,947.20          | 1,980.38 | 2,571.47 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 223.74   | 321.28            | 326.60   | 424.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 193.84 | 278.35            | 282.96   | 367.38   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 472.69 | 682.16            | 702.22   | 914.58   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 610.72 | 880.43            | 903.91   | 1,176.50 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 610.72 | 880.43            | 903.91   | 1,176.50 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 293.93 | 422.68            | 431.26   | 560.43   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 55.76  | 80.70             | 83.64    | 109.12   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 902.58 | 1,296.64          | 1,319.61 | 1,713.77 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 884.06 | 1,270.04          | 1,292.58 | 1,678.67 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 884.06 | 1,270.04          | 1,292.58 | 1,678.67 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.86   | 2.68              | 2.72     | 3.53     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.71   | 8.19              | 8.33     | 10.81    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.09   | 8.74              | 8.89     | 11.54    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.12   | 3.05              | 3.10     | 4.02     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.46  | 27.94             | 28.40    | 36.87    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 63.74  | 99.67             | 122.22   | 165.57   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07     | 0.08     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 9.24   | 13.75             | 15.22    | 20.16    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 91.18  | 132.88            | 140.09   | 183.52   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.44  | 28.42             | 33.86    | 45.59    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 43.59  | 62.59             | 63.62    | 82.59    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.53   | 0.77              | 0.78     | 1.01     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 39.74  | 57.06             | 57.99    | 75.29    |



**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 51.69  | 74.22             | 75.44  | 97.94  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 65.85  | 94.55             | 96.11  | 124.78 |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 7.99   | 12.17             | 14.17  | 18.99  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 12.06  | 18.01             | 20.11  | 26.70  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.45              | 0.46   | 0.59   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 6.47   | 9.29              | 9.45   | 12.27  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.82   | 1.18              | 1.20   | 1.56   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 121.18 | 173.99            | 176.86 | 229.61 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 21.07  | 30.26             | 30.76  | 39.93  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 80.37  | 115.40            | 117.30 | 152.29 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 37.10  | 53.27             | 54.15  | 70.30  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 81.91  | 117.61            | 119.54 | 155.20 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.19   | 6.02              | 6.12   | 7.94   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 7.01   | 10.07             | 10.23  | 13.28  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 98.52  | 141.49            | 143.87 | 186.81 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 164.95 | 236.85            | 240.75 | 312.56 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.56   | 10.86             | 11.04  | 14.33  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.92   | 10.86             | 13.40  | 18.18  |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 299.24 | 429.67            | 436.74 | 567.02 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 299.01 | 429.34            | 436.41 | 566.58 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 68.40  | 98.27             | 100.05 | 129.95 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.69     | 11.05             | 11.25    | 14.60    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.29    | 16.21             | 16.48    | 21.39    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 211.88   | 304.23            | 309.24   | 401.48   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 146.09   | 209.76            | 213.22   | 276.82   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.05     | 6.09              | 6.88     | 9.16     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.10     | 6.16              | 6.96     | 9.27     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 20.30    | 29.15             | 29.63    | 38.47    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 172.13   | 247.17            | 251.26   | 326.22   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 161.51   | 231.92            | 235.77   | 306.10   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 225.98   | 324.50            | 329.86   | 428.27   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 198.89   | 285.58            | 290.28   | 376.87   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.64     | 0.92              | 0.93     | 1.21     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.45     | 0.65              | 0.66     | 0.86     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.45     | 0.65              | 0.66     | 0.86     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 41.35    | 59.37             | 60.34    | 78.34    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.62     | 3.76              | 3.83     | 4.97     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,288.62 | 1,888.94          | 2,019.17 | 2,654.12 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,287.97 | 1,888.01          | 2,018.23 | 2,652.90 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.18     | 13.18             | 13.39    | 17.39    |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 68.15  | 102.14            | 114.81 | 152.68 |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 98.35  | 145.50            | 158.88 | 209.90 |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.21   | 8.92              | 9.06   | 11.77  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 36.80  | 52.84             | 53.71  | 69.73  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 45.29  | 65.03             | 66.10  | 85.81  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 45.29  | 65.03             | 66.10  | 85.81  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 44.90  | 64.47             | 65.53  | 85.08  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 9.11   | 13.56             | 15.03  | 19.92  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 16.46  | 23.63             | 24.02  | 31.18  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.57   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 446.20 | 640.69            | 651.23 | 845.49 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 344.31 | 494.39            | 502.52 | 652.42 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 86.05  | 123.56            | 125.60 | 163.06 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.37   | 1.97              | 2.00   | 2.60   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 18.31  | 26.29             | 26.73  | 34.70  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.42   | 13.53             | 13.76  | 17.86  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 32.83  | 47.14             | 47.92  | 62.21  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 34.62  | 49.71             | 50.53  | 65.60  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 34.62  | 49.71             | 50.53  | 65.60  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.19   | 13.20             | 13.41  | 17.41  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 26.59  | 38.18             | 38.80  | 50.38  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.47  | 15.03             | 15.28  | 19.84  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.86   | 1.24              | 1.26   | 1.64   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 20.15  | 28.94             | 29.41  | 38.19  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 22.01  | 31.61             | 32.13  | 41.71  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 22.01  | 31.61             | 32.13  | 41.71  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.56   | 10.86             | 11.04  | 14.33  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.51   | 2.17              | 2.21   | 2.87   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 124.77 | 179.16            | 182.15 | 236.49 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 330.97 | 475.33            | 483.40 | 627.68 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 25.40  | 36.46             | 37.06  | 48.12  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 19.96  | 29.14             | 30.86  | 40.48  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.96  | 29.14             | 30.86  | 40.48  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.18   | 6.01              | 6.11   | 7.93   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.74   | 5.37              | 5.46   | 7.08   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.60   | 2.30              | 2.34   | 3.04   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.76  | 16.89             | 17.17  | 22.29  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.65  | 16.73             | 17.00  | 22.07  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.76  | 18.33             | 18.63  | 24.19  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 221.05 | 317.41            | 322.63 | 418.86 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 134.22 | 192.72            | 195.89 | 254.32 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 175.65 | 252.21            | 256.36 | 332.83 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 175.65 | 252.21            | 256.36 | 332.83 |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 39.05  | 56.07             | 57.00  | 74.00  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.77  | 18.34             | 18.64  | 24.20  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.00   | 1.43              | 1.45   | 1.89   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 48.01  | 68.93             | 70.07  | 90.97  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 117.52 | 176.90            | 200.75 | 267.53 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.94   | 9.97              | 10.13  | 13.15  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 92.58  | 141.09            | 164.34 | 220.25 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.38   | 0.55              | 0.56   | 0.72   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.22   | 4.63              | 4.70   | 6.11   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.88   | 2.70              | 2.74   | 3.56   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.28   | 7.59              | 7.71   | 10.01  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 92.02  | 132.13            | 134.30 | 174.36 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 92.02  | 132.13            | 134.30 | 174.36 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 92.02  | 132.13            | 134.30 | 174.36 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 92.02  | 132.13            | 134.30 | 174.36 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.40   | 0.58              | 0.59   | 0.76   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 39.74  | 57.06             | 57.99  | 75.29  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 113.80 | 163.40            | 166.09 | 215.63 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 277.71   | 398.76            | 405.32   | 526.22   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 281.12   | 403.65            | 410.29   | 532.68   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.29     | 9.03              | 9.17     | 11.91    |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 38.12    | 59.80             | 73.78    | 100.06   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 107.69   | 165.61            | 196.48   | 264.36   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.17     | 3.12              | 3.17     | 4.12     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.83     | 2.63              | 2.67     | 3.47     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.83     | 2.63              | 2.67     | 3.47     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 64.17    | 97.05             | 111.26   | 148.60   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.08     | 1.55              | 1.57     | 2.04     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.25    | 23.33             | 23.71    | 30.79    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 13.19    | 18.94             | 19.25    | 24.99    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.05     | 11.56             | 11.75    | 15.26    |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,751.46 | 3,963.67          | 4,062.02 | 5,284.56 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 262.28   | 389.46            | 428.84   | 567.62   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 262.28   | 389.46            | 428.84   | 567.62   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,753.61 | 3,966.76          | 4,065.16 | 5,288.63 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2,753.33 | 3,966.37          | 4,064.76 | 5,288.12 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,752.94 | 3,965.80          | 4,064.19 | 5,287.37 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,753.19 | 3,966.15          | 4,064.54 | 5,287.84 |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,751.46 | 3,963.67          | 4,062.02 | 5,284.56 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 222.72   | 319.80            | 325.06   | 422.02   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 214.78   | 308.40            | 313.47   | 406.98   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.03    | 25.89             | 26.31    | 34.16    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 122.51   | 184.51            | 209.63   | 279.44   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 42.14    | 60.51             | 61.50    | 79.85    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 42.14    | 60.51             | 61.50    | 79.85    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24     | 0.34              | 0.35     | 0.45     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 98.05    | 152.79            | 186.10   | 251.76   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.54    | 22.31             | 22.68    | 29.44    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.27    | 30.55             | 31.05    | 40.31    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 639.71   | 918.54            | 933.66   | 1,212.15 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 79.40    | 114.01            | 115.88   | 150.45   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 20.45    | 29.37             | 29.85    | 38.75    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.95     | 11.42             | 11.61    | 15.07    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.85    | 30.86             | 37.40    | 50.54    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 74.28    | 106.65            | 108.41   | 140.75   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.30     | 9.05              | 9.20     | 11.94    |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 16.85    | 24.19             | 24.59    | 31.92    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 167.41 | 241.83            | 249.51 | 325.15   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 191.75 | 276.78            | 285.05 | 371.29   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 224.22 | 323.41            | 332.44 | 432.83   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.32   | 3.33              | 3.38   | 4.39     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.32   | 3.33              | 3.38   | 4.39     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.32   | 3.33              | 3.38   | 4.39     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 292.73 | 420.32            | 427.24 | 554.68   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 210.50 | 302.25            | 307.23 | 398.87   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 619.30 | 899.41            | 940.29 | 1,229.36 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 16.16  | 23.24             | 23.69  | 30.77    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.50  | 22.28             | 22.71  | 29.50    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 34.78  | 49.95             | 50.77  | 65.92    |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.55  | 23.76             | 24.15  | 31.36    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.64   | 6.67              | 6.78   | 8.80     |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.51              | 0.52   | 0.67     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.81   | 1.17              | 1.19   | 1.54     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.38   | 9.17              | 9.32   | 12.10    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.10   | 0.14              | 0.15   | 0.19     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.10   | 0.14              | 0.15   | 0.19     |



**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.95     | 9.99              | 10.16    | 13.19    |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.89    | 42.91             | 43.62    | 56.63    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.63     | 0.91              | 0.92     | 1.20     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.87     | 2.69              | 2.73     | 3.54     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.55     | 5.09              | 5.18     | 6.72     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 32.91    | 47.25             | 48.03    | 62.35    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.42     | 2.04              | 2.07     | 2.69     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.39    | 19.23             | 19.55    | 25.38    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 327.34   | 470.05            | 477.88   | 620.45   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.99     | 1.42              | 1.45     | 1.88     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 26.04    | 37.39             | 38.00    | 49.34    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.89    | 37.18             | 37.79    | 49.06    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.64     | 5.23              | 5.32     | 6.90     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 152.31   | 218.73            | 222.40   | 288.76   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.88     | 4.40              | 5.17     | 6.94     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 98.78    | 141.83            | 144.17   | 187.17   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,832.27 | 4,071.81          | 4,151.67 | 5,394.28 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,581.84 | 2,275.26          | 2,322.77 | 3,018.94 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,843.15 | 4,087.44          | 4,167.58 | 5,414.93 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,834.61 | 4,075.18          | 4,155.11 | 5,398.75 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,832.27 | 4,071.81          | 4,151.67 | 5,394.28 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 9.62     | 13.82             | 14.07    | 18.27    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.02     | 11.52             | 11.71    | 15.20    |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 284.47   | 408.48            | 415.23   | 539.10   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.40     | 0.58              | 0.59     | 0.76     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.79     | 14.05             | 14.28    | 18.54    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.79     | 14.05             | 14.28    | 18.54    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.00     | 7.18              | 7.30     | 9.48     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.98    | 25.81             | 26.24    | 34.06    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.73    | 49.87             | 50.69    | 65.81    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 17.33    | 24.89             | 25.30    | 32.85    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.03     | 10.10             | 10.26    | 13.32    |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19     | 0.27              | 0.27     | 0.35     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.08    | 21.66             | 22.01    | 28.58    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 25.43    | 37.56             | 40.85    | 53.92    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 203.00   | 296.73            | 315.07   | 413.48   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 884.35   | 1,288.03          | 1,355.97 | 1,775.84 |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 884.35   | 1,288.03          | 1,355.97 | 1,775.84 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,345.84 | 1,950.68          | 2,029.53 | 2,650.31 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,264.34 | 1,833.66          | 1,910.58 | 2,495.88 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 612.61   | 879.63            | 894.10   | 1,160.80 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 642.46   | 922.49            | 937.68   | 1,217.37 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 641.98   | 921.81            | 936.98   | 1,216.46 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.38     | 0.55              | 0.56     | 0.72     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12     | 0.18              | 0.18     | 0.23     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.82    | 15.53             | 15.79    | 20.50    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.78     | 6.87              | 6.98     | 9.06     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 70.36    | 101.02            | 102.69   | 133.32   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.42     | 6.35              | 6.45     | 8.38     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 34.31    | 49.27             | 50.09    | 65.04    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 344.59   | 494.88            | 503.23   | 653.40   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 344.59   | 494.88            | 503.23   | 653.40   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 313.30   | 449.94            | 457.55   | 594.10   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 313.30   | 449.94            | 457.55   | 594.10   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.42     | 7.79              | 7.92     | 10.28    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 203.92   | 292.88            | 297.89   | 386.81   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 128.95   | 185.22            | 188.41   | 244.65   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 171.65   | 246.47            | 250.53   | 325.26   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 15.95    | 22.91             | 23.29    | 30.23    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 167.81   | 241.00            | 245.08   | 318.21   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 12.82    | 18.41             | 18.72    | 24.30    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 69.62    | 99.97             | 101.62   | 131.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.12     | 4.48              | 4.56     | 5.92     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 241.97   | 347.43            | 353.15   | 458.49   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 408.73   | 586.88            | 596.54   | 774.48   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.49     | 0.71              | 0.72     | 0.93     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 76.46    | 109.79            | 111.60   | 144.89   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 76.46    | 109.79            | 111.60   | 144.89   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 76.46    | 109.79            | 111.60   | 144.89   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 57.73    | 82.89             | 84.25    | 109.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.28     | 9.01              | 9.16     | 11.89    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 246.09   | 353.35            | 359.17   | 466.30   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 79.43    | 114.05            | 115.92   | 150.50   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 79.43    | 114.05            | 115.92   | 150.50   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 92.77    | 133.21            | 135.40   | 175.79   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2,739.88 | 3,947.05          | 4,045.13 | 5,262.63 |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 224.35 | 322.15            | 327.48 | 425.17   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 53.58  | 76.93             | 78.20  | 101.53   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.84  | 25.61             | 26.04  | 33.80    |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.72   | 3.91              | 3.97   | 5.16     |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.26   | 7.56              | 7.68   | 9.97     |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 235.91 | 338.75            | 344.37 | 447.10   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 216.48 | 310.84            | 315.99 | 410.25   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 429.69 | 619.05            | 634.52 | 825.52   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 429.84 | 619.26            | 634.73 | 825.80   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 422.64 | 608.92            | 624.22 | 812.16   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 43.23  | 62.07             | 63.09  | 81.91    |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 43.00  | 63.80             | 70.13  | 92.79    |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 302.23 | 437.35            | 453.23 | 591.29   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 179.18 | 259.33            | 268.88 | 350.81   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 179.18 | 259.33            | 268.88 | 350.81   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 107.10 | 153.78            | 156.32 | 202.95   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 585.78 | 841.12            | 855.01 | 1,110.05 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 587.25 | 843.23            | 857.15 | 1,112.84 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 586.34   | 841.93            | 855.83   | 1,111.12 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,220.67 | 1,762.68          | 1,817.21 | 2,367.67 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,214.89 | 1,754.39          | 1,808.78 | 2,356.72 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,220.67 | 1,762.68          | 1,817.21 | 2,367.67 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,122.46 | 1,621.67          | 1,673.89 | 2,181.59 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 771.19   | 1,107.88          | 1,127.48 | 1,464.24 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 771.19   | 1,107.88          | 1,127.48 | 1,464.24 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 771.19   | 1,107.88          | 1,127.48 | 1,464.24 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 770.99   | 1,107.58          | 1,127.18 | 1,463.85 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 770.99   | 1,107.58          | 1,127.18 | 1,463.85 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.44     | 3.73              | 4.36     | 5.85     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.41     | 2.02              | 2.05     | 2.67     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.72     | 2.47              | 2.51     | 3.26     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03     | 0.04              | 0.04     | 0.05     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.02     | 11.52             | 11.71    | 15.20    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 160.36   | 230.27            | 234.08   | 303.91   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 44.42    | 63.78             | 64.83    | 84.17    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 481.33   | 691.13            | 702.50   | 912.04   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 78.08    | 112.11            | 113.96   | 147.95   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.04    | 31.64             | 32.16    | 41.75    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 22.04    | 31.64             | 32.16    | 41.75    |

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-----------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
|   |                             | Moderate                                     |   |  |        |                   |        |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.48   | 6.43              | 6.53   | 8.48     |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 7.53   | 10.82             | 10.99  | 14.27    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 7.16   | 10.28             | 10.45  | 13.57    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.10   | 4.45              | 4.52   | 5.87     |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 86.78  | 124.61            | 126.66 | 164.44   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.00   | 2.87              | 2.92   | 3.79     |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 50.86  | 73.03             | 74.23  | 96.37    |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 52.38  | 75.21             | 76.45  | 99.25    |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 185.46 | 266.30            | 270.68 | 351.42   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 28.32  | 40.66             | 41.33  | 53.65    |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 65.62  | 102.54            | 125.56 | 170.04   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 154.04 | 221.18            | 224.83 | 291.89   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 595.17 | 866.77            | 912.30 | 1,194.72 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 591.22 | 861.11            | 906.54 | 1,187.25 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 591.22 | 861.11            | 906.54 | 1,187.25 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 37.41  | 53.71             | 54.60  | 70.88    |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.22  | 16.11             | 16.38  | 21.26    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 23.26  | 33.66             | 34.91  | 45.56    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 23.26  | 33.66             | 34.91  | 45.56    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 23.26  | 33.66             | 34.91  | 45.56    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 64.56  | 92.71             | 94.26  | 122.38 |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.05   | 5.88              | 6.12   | 7.99   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 94.99  | 136.39            | 138.63 | 179.98 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.93   | 5.64              | 5.73   | 7.44   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.57  | 33.84             | 34.40  | 44.66  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.02  | 14.38             | 14.62  | 18.98  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.80  | 25.55             | 25.97  | 33.72  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.56  | 18.04             | 18.33  | 23.80  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 190.68 | 282.41            | 309.14 | 408.63 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.86   | 1.24              | 1.26   | 1.63   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.95   | 1.37              | 1.39   | 1.80   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.03  | 21.59             | 21.94  | 28.49  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.28   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 147.84 | 212.29            | 215.78 | 280.14 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.83   | 6.93              | 7.05   | 9.15   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.97   | 8.60              | 8.83   | 11.49  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 69.64  | 99.99             | 101.64 | 131.96 |



**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 47.15  | 67.71             | 68.82    | 89.35    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 224.29 | 334.91            | 373.41   | 495.67   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 128.56 | 184.60            | 187.67   | 243.66   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.62   | 5.20              | 5.28     | 6.86     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 23.57  | 33.84             | 34.40    | 44.66    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 1.06              | 1.08     | 1.40     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.80   | 14.07             | 14.30    | 18.56    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.93   | 12.35             | 15.00    | 20.28    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.32  | 15.77             | 18.50    | 24.82    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.11  | 16.91             | 19.66    | 26.34    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 115.01 | 165.15            | 167.87   | 217.94   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 848.28 | 1,218.03          | 1,238.09 | 1,607.39 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 846.62 | 1,215.66          | 1,235.68 | 1,604.26 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 833.54 | 1,196.87          | 1,216.59 | 1,579.48 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 57.29  | 82.26             | 83.62    | 108.56   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.44  | 23.60             | 23.99    | 31.14    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.19  | 25.31             | 27.34    | 36.02    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.38  | 20.65             | 20.99    | 27.26    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 58.57  | 86.45             | 93.91    | 123.90   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 58.57  | 86.45             | 93.91    | 123.90   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-54. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 64.60  | 92.76             | 94.29  | 122.41 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 39.10  | 56.15             | 57.07  | 74.10  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.83   | 9.81              | 9.97   | 12.95  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 19.92  | 28.60             | 29.07  | 37.75  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 83.70  | 120.18            | 122.16 | 158.60 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 64.47  | 92.58             | 94.10  | 122.17 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 160.52 | 230.49            | 234.28 | 304.17 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 33.15  | 47.59             | 48.38  | 62.81  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 28.69  | 41.19             | 41.87  | 54.35  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 178.20   | 228.17            | 229.23   | 273.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 858.34   | 1,097.71          | 1,102.63 | 1,312.79 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 726.72   | 929.39            | 933.55   | 1,111.49 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 356.54   | 456.48            | 458.60   | 546.16   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 126.63   | 161.95            | 162.67   | 193.68   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 45.86    | 58.69             | 58.96    | 70.20    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.93     | 6.32              | 6.35     | 7.56     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 34.09    | 43.63             | 43.83    | 52.19    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 316.66   | 405.24            | 407.10   | 484.77   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 394.05   | 504.22            | 506.51   | 603.13   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 394.05   | 504.22            | 506.51   | 603.13   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 75.81    | 96.99             | 97.43    | 116.01   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 74.18    | 94.87             | 95.29    | 113.46   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 59.06    | 75.62             | 75.97    | 90.48    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.54     | 4.56              | 4.58     | 5.46     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 37.72    | 48.24             | 48.45    | 57.69    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 144.62   | 185.06            | 185.91   | 221.37   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1,898.14 | 2,539.19          | 2,566.63 | 3,089.09 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.96    | 20.83             | 21.54    | 26.91    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 114.11   | 145.94            | 146.59   | 174.53   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 36.61    | 46.81             | 47.02    | 55.99    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 347.97   | 445.03            | 447.02   | 532.23   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 354.08   | 452.96            | 455.01   | 541.78   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.34    | 17.06             | 17.14    | 20.40    |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.10     | 2.69              | 2.70     | 3.21     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.56     | 10.95             | 11.00    | 13.10    |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3,842.76 | 4,915.81          | 4,938.02 | 5,879.61 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,506.35 | 4,485.58          | 4,505.87 | 5,365.09 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,845.78 | 4,919.67          | 4,941.91 | 5,884.24 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.62    | 39.15             | 39.33    | 46.82    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 297.41   | 385.67            | 388.17   | 463.74   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.78     | 8.69              | 8.74     | 10.41    |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,708.17 | 2,185.50          | 2,195.43 | 2,614.15 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,682.81 | 2,153.06          | 2,162.84 | 2,575.35 |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,708.17 | 2,185.50          | 2,195.43 | 2,614.15 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 886.73   | 1,314.23          | 1,346.05 | 1,656.28 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 886.73   | 1,314.23          | 1,346.05 | 1,656.28 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 795.71   | 1,240.76          | 1,278.41 | 1,588.54 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.54     | 10.92             | 10.97    | 13.06    |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 26.20    | 33.50             | 33.65    | 40.07    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 172.69   | 220.85            | 221.84   | 264.12   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.75    | 18.86             | 18.94    | 22.55    |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 160.49   | 260.89            | 270.07   | 338.11   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 113.37   | 200.62            | 209.53   | 266.03   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 724.20   | 927.10            | 931.39   | 1,109.19 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 725.17   | 928.35            | 932.64   | 1,110.68 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 725.17   | 928.35            | 932.64   | 1,110.68 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 178.20   | 228.17            | 229.23   | 273.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.37     | 8.15              | 8.18     | 9.74     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 422.73   | 540.95            | 543.41   | 647.08   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,110.04 | 3,977.68          | 3,995.55 | 4,757.18 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 439.49   | 562.05            | 564.57   | 672.18   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 97.33    | 171.53            | 179.07   | 227.21   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35     | 0.45              | 0.45     | 0.54     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 581.46   | 743.65            | 746.98   | 889.37   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.22     | 5.40              | 5.42     | 6.46     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.58    | 44.22             | 44.42    | 52.88    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 20.68    | 26.45             | 26.57    | 31.63    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 249.70   | 334.61            | 338.31   | 407.34   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 249.70   | 334.61            | 338.31   | 407.34   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 249.70   | 334.61            | 338.31   | 407.34   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 32.37    | 41.39             | 41.58    | 49.50    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 123.58   | 158.04            | 158.75   | 189.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.65     | 8.51              | 8.55     | 10.18    |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 208.31   | 266.41            | 267.60   | 318.61   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 208.31   | 266.41            | 267.60   | 318.61   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 208.31   | 266.41            | 267.60   | 318.61   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 720.01   | 920.80            | 924.92   | 1,101.21 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,490.70 | 1,906.43          | 1,914.96 | 2,279.95 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,445.56 | 1,848.70          | 1,856.98 | 2,210.91 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 341.63   | 437.09            | 439.07   | 522.81   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4,191.60 | 5,570.77          | 5,625.97 | 6,760.88 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4,191.60 | 5,570.77          | 5,625.97 | 6,760.88 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4,264.05 | 5,663.43          | 5,719.04 | 6,871.69 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 111.64   | 142.78            | 143.42   | 170.75   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 51.66    | 66.06             | 66.36    | 79.00    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 111.64   | 142.78            | 143.42   | 170.75   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 110.59   | 141.43            | 142.07   | 169.14   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,335.26 | 1,707.99          | 1,715.69 | 2,042.80 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,349.62 | 1,726.35          | 1,734.13 | 2,064.76 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,290.58 | 1,650.84          | 1,658.29 | 1,974.46 |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 897.19   | 1,147.40          | 1,152.54 | 1,372.21 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 174.08   | 222.62            | 223.62   | 266.24   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 149.05   | 190.62            | 191.47   | 227.97   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 537.13   | 686.92            | 690.00   | 821.51   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,685.20 | 2,155.17          | 2,164.82 | 2,577.43 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,683.61 | 2,153.13          | 2,162.78 | 2,575.00 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,549.63 | 1,981.78          | 1,990.66 | 2,370.07 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,534.98 | 1,963.05          | 1,971.85 | 2,347.68 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 23.15    | 29.61             | 29.74    | 35.41    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 307.09   | 393.15            | 394.97   | 470.38   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,194.32 | 1,527.82          | 1,534.73 | 1,827.37 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,194.32 | 1,527.82          | 1,534.73 | 1,827.37 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,078.13 | 1,379.23          | 1,385.47 | 1,649.67 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 41.30    | 53.19             | 53.48    | 63.79    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 46.36    | 59.66             | 59.99    | 71.53    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29     | 0.37              | 0.37     | 0.44     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 404.86   | 517.76            | 520.08   | 619.21   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 534.76   | 683.89            | 686.96   | 817.89   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4,271.54 | 5,467.67          | 5,492.86 | 6,541.25 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4,358.96 | 5,579.47          | 5,605.16 | 6,674.95 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 719.44   | 920.22            | 924.36   | 1,100.59 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 623.30   | 797.28            | 800.87   | 953.55   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,514.87 | 1,975.15          | 1,989.43 | 2,379.88 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,958.74 | 2,543.51          | 2,560.44 | 3,059.93 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,958.74 | 2,543.51          | 2,560.44 | 3,059.93 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 881.64   | 1,134.45          | 1,140.53 | 1,359.99 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 198.43   | 260.67            | 262.83   | 314.99   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2,901.76 | 3,718.00          | 3,735.66 | 4,449.76 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2,842.19 | 3,641.82          | 3,659.14 | 4,358.66 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2,842.19 | 3,641.82          | 3,659.14 | 4,358.66 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.11     | 7.81              | 7.85     | 9.34     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 19.17    | 24.51             | 24.62    | 29.31    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.08    | 26.96             | 27.08    | 32.24    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.89     | 8.81              | 8.85     | 10.54    |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 67.38    | 86.17             | 86.56    | 103.05   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 191.63   | 334.64            | 349.03   | 442.23   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.11     | 0.14              | 0.14     | 0.16     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 26.11    | 38.72             | 39.66    | 48.80    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 283.78   | 384.40            | 389.21   | 469.79   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.67    | 91.20             | 94.67    | 119.06   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 140.16   | 179.25            | 180.06   | 214.37   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.85     | 2.37              | 2.38     | 2.83     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 130.99   | 167.52            | 168.27   | 200.35   |



**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|----------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 166.22 | 212.57            | 213.52   | 254.22   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 213.04 | 272.46            | 273.68   | 325.84   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 23.55  | 37.83             | 39.11    | 48.85    |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 37.14  | 55.20             | 56.56    | 69.63    |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.89   | 1.14              | 1.15     | 1.36     |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 21.12  | 27.01             | 27.13    | 32.30    |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 2.49   | 3.18              | 3.20     | 3.81     |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 389.65 | 498.32            | 500.55   | 595.96   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 67.12  | 85.83             | 86.22    | 102.65   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 258.44 | 330.51            | 331.99   | 395.27   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 119.31 | 152.58            | 153.26   | 182.47   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 263.38 | 336.83            | 338.34   | 402.82   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 14.66  | 18.74             | 18.83    | 22.42    |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 22.54  | 28.83             | 28.96    | 34.48    |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 313.59 | 401.29            | 403.12   | 480.03   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 530.71 | 678.72            | 681.76   | 811.70   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 25.48  | 32.59             | 32.74    | 38.97    |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 20.67  | 36.58             | 38.20    | 48.51    |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 960.93 | 1,228.91          | 1,234.42 | 1,469.69 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 960.55 | 1,228.43          | 1,233.93 | 1,469.12 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 219.84 | 281.83            | 283.19   | 337.37   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.73    | 31.68             | 31.83    | 37.91    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 36.30    | 46.42             | 46.63    | 55.52    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 681.38   | 871.40            | 875.30   | 1,042.13 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 469.77   | 600.77            | 603.46   | 718.48   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.22    | 18.61             | 19.12    | 23.65    |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.77    | 19.32             | 19.83    | 24.50    |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 65.38    | 83.62             | 83.99    | 100.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 553.48   | 707.95            | 711.14   | 846.72   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 519.34   | 664.29            | 667.29   | 794.50   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 726.67   | 929.43            | 933.61   | 1,111.59 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 640.49   | 819.11            | 822.78   | 979.60   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.55     | 1.98              | 1.99     | 2.37     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.32     | 1.69              | 1.69     | 2.02     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.32     | 1.69              | 1.69     | 2.02     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 132.95   | 170.03            | 170.79   | 203.35   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.76     | 11.22             | 11.27    | 13.42    |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4,077.80 | 5,639.56          | 5,725.90 | 6,943.71 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4,076.05 | 5,637.33          | 5,723.66 | 6,941.03 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.51    | 37.74             | 37.90    | 45.13    |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Johnsonville, TN                                      |                             |  |   |  |          |                   |          |          |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 211.85   | 317.98            | 326.18   | 402.36   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 308.64   | 441.77            | 450.52   | 550.41   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 21.33    | 27.28             | 27.40    | 32.62    |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 119.30   | 152.57            | 153.25   | 182.46   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 145.63   | 186.24            | 187.08   | 222.73   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 145.63   | 186.24            | 187.08   | 222.73   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 144.91   | 185.32            | 186.15   | 221.63   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 25.32    | 37.71             | 38.64    | 47.60    |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 52.95    | 67.72             | 68.03    | 80.99    |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.84     | 1.08              | 1.08     | 1.29     |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,434.82 | 1,834.96          | 1,843.18 | 2,194.48 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1,107.18 | 1,415.94          | 1,422.29 | 1,693.37 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 269.86   | 345.11            | 346.66   | 412.73   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 4.50     | 5.76              | 5.78     | 6.89     |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 58.89    | 75.31             | 75.64    | 90.06    |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 30.60    | 39.14             | 39.32    | 46.81    |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 108.15   | 138.31            | 138.93   | 165.41   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 111.18   | 142.19            | 142.82   | 170.05   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 111.18   | 142.19            | 142.82   | 170.05   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 29.68    | 37.96             | 38.13    | 45.39    |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 85.49    | 109.34            | 109.83   | 130.76   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 34.58    | 44.22             | 44.42    | 52.89    |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.65     | 3.38              | 3.40     | 4.05     |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 64.81    | 82.88             | 83.25    | 99.12    |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 70.42    | 90.06             | 90.46    | 107.70   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 70.42    | 90.06             | 90.46    | 107.70   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 25.48    | 32.59             | 32.74    | 38.97    |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.91     | 6.27              | 6.30     | 7.50     |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 401.18   | 513.21            | 515.53   | 613.83   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,064.09 | 1,361.93          | 1,368.18 | 1,629.28 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 81.66    | 104.44            | 104.90   | 124.90   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 56.57    | 77.67             | 78.79    | 95.39    |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 56.57    | 77.67             | 78.79    | 95.39    |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.46    | 17.21             | 17.28    | 20.58    |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.01    | 16.64             | 16.71    | 19.90    |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.84     | 6.20              | 6.22     | 7.41     |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 42.40    | 54.22             | 54.46    | 64.85    |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 42.16    | 53.91             | 54.15    | 64.47    |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 45.74    | 58.50             | 58.76    | 69.96    |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 710.83   | 909.06            | 913.13   | 1,087.17 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 431.85   | 552.28            | 554.76   | 660.49   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 564.71   | 722.19            | 725.42   | 863.69   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 564.71   | 722.19            | 725.42   | 863.69   |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 125.60 | 160.63            | 161.35 | 192.10 |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 40.18  | 51.38             | 51.61  | 61.45  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.56   | 4.55              | 4.57   | 5.45   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 154.38 | 197.43            | 198.31 | 236.11 |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 357.34 | 546.64            | 561.98 | 695.79 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.44  | 27.42             | 27.54  | 32.79  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 275.35 | 441.74            | 456.61 | 570.33 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.18   | 1.51              | 1.51   | 1.80   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.38   | 12.00             | 12.05  | 14.35  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.27   | 6.74              | 6.77   | 8.06   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.41  | 18.42             | 18.51  | 22.03  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 295.90 | 378.42            | 380.12 | 452.57 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 295.90 | 378.42            | 380.12 | 452.57 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 295.90 | 378.42            | 380.12 | 452.57 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 295.90 | 378.42            | 380.12 | 452.57 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.00   | 1.27              | 1.28   | 1.52   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 130.99 | 167.52            | 168.27 | 200.35 |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 365.94 | 467.99            | 470.09 | 559.68 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 894.77   | 1,144.31          | 1,149.43  | 1,368.51  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 904.73   | 1,157.04          | 1,162.22  | 1,383.74  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.51    | 26.23             | 26.34     | 31.36     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 113.98   | 201.41            | 210.32    | 266.98    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 329.27   | 541.63            | 561.39    | 704.29    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.57     | 9.68              | 9.73      | 11.58     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.93     | 6.32              | 6.35      | 7.56      |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.93     | 6.32              | 6.35      | 7.56      |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 197.96   | 307.16            | 316.30    | 392.67    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.12     | 3.99              | 4.01      | 4.77      |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 52.36    | 66.96             | 67.26     | 80.08     |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 43.29    | 55.36             | 55.61     | 66.21     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 24.18    | 30.93             | 31.06     | 36.99     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8,846.40 | 11,455.30         | 11,527.01 | 13,766.28 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 810.52   | 1,177.75          | 1,203.33  | 1,474.74  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 810.52   | 1,177.75          | 1,203.33  | 1,474.74  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 8,853.91 | 11,464.91         | 11,536.66 | 13,777.77 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 8,853.14 | 11,463.92         | 11,535.67 | 13,776.60 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 8,851.60 | 11,461.96         | 11,533.70 | 13,774.24 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 8,852.64 | 11,463.28         | 11,535.03 | 13,775.83 |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8,846.40 | 11,455.30         | 11,527.01 | 13,766.28 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 716.18   | 915.92            | 920.02    | 1,095.38  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 690.89   | 883.57            | 887.53    | 1,056.69  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 59.14    | 75.63             | 75.97     | 90.45     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 375.27   | 574.48            | 590.66    | 731.40    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 135.50   | 173.29            | 174.07    | 207.25    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 135.50   | 173.29            | 174.07    | 207.25    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31     | 0.40              | 0.40      | 0.47      |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 293.77   | 507.57            | 528.82    | 668.89    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 48.49    | 62.01             | 62.29     | 74.16     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 68.49    | 87.60             | 87.99     | 104.76    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2,055.87 | 2,629.20          | 2,640.97  | 3,144.34  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 252.32   | 322.68            | 324.13    | 385.91    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 65.77    | 84.11             | 84.48     | 100.59    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.58    | 32.71             | 32.86     | 39.12     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 60.01    | 102.57            | 106.74    | 134.78    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 238.85   | 305.46            | 306.83    | 365.31    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.27    | 25.92             | 26.04     | 31.00     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 56.40    | 72.13             | 72.45     | 86.26     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 535.88   | 701.17            | 706.59   | 845.99   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 614.14   | 801.30            | 807.17   | 965.75   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 719.41   | 935.95            | 942.44   | 1,126.80 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.91     | 7.56              | 7.59     | 9.04     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.91     | 7.56              | 7.59     | 9.04     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.91     | 7.56              | 7.59     | 9.04     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 941.59   | 1,204.19          | 1,209.59 | 1,440.13 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 677.15   | 866.00            | 869.88   | 1,035.69 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1,975.93 | 2,638.67          | 2,666.56 | 3,208.07 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 52.09    | 66.90             | 67.24    | 80.14    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 49.79    | 63.95             | 64.28    | 76.61    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 106.53   | 136.25            | 136.86   | 162.95   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 55.45    | 70.92             | 71.24    | 84.81    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.25    | 19.50             | 19.59    | 23.32    |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.41     | 0.52              | 0.52     | 0.62     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.86     | 3.66              | 3.68     | 4.38     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.61    | 25.08             | 25.19    | 29.99    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.24     | 0.31              | 0.31     | 0.37     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.24     | 0.31              | 0.31     | 0.37     |



**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|---|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.30    | 29.81             | 29.95     | 35.66     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 96.11    | 122.91            | 123.46    | 146.99    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61     | 2.06              | 2.06      | 2.46      |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.10     | 7.81              | 7.84      | 9.34      |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.75    | 15.02             | 15.09     | 17.96     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 105.62   | 135.08            | 135.68    | 161.55    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.80     | 6.14              | 6.17      | 7.34      |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 44.00    | 56.27             | 56.52     | 67.29     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,052.61 | 1,346.53          | 1,352.62  | 1,610.53  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.56     | 3.28              | 3.29      | 3.92      |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 81.28    | 103.94            | 104.41    | 124.31    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 80.96    | 103.54            | 104.01    | 123.83    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.11    | 14.22             | 14.29     | 17.01     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 489.53   | 626.35            | 629.19    | 749.21    |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.75     | 14.17             | 14.66     | 18.35     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 317.62   | 406.20            | 408.02    | 485.78    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9,100.67 | 11,693.69         | 11,753.98 | 14,010.66 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 5,085.93 | 6,547.43          | 6,582.97  | 7,850.52  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 9,135.97 | 11,738.90         | 11,799.41 | 14,064.77 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9,111.61 | 11,707.75         | 11,768.11 | 14,027.50 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-------------------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9,100.67 | 11,693.69         | 11,753.98 | 14,010.66 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 31.41    | 40.25             | 40.44     | 48.17     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.62    | 34.04             | 34.20     | 40.71     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 915.92   | 1,171.47          | 1,176.74  | 1,401.06  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.00     | 1.27              | 1.28      | 1.52      |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 31.10    | 39.77             | 39.95     | 47.56     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 31.10    | 39.77             | 39.95     | 47.56     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.08    | 19.28             | 19.37     | 23.06     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 57.46    | 73.48             | 73.81     | 87.87     |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 111.68   | 142.83            | 143.47    | 170.81    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 55.49    | 70.96             | 71.28     | 84.86     |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 22.90    | 29.29             | 29.42     | 35.03     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.55     | 0.70              | 0.70      | 0.84      |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 47.48    | 60.72             | 60.99     | 72.61     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 85.80    | 121.18            | 123.37    | 150.29    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 643.83   | 880.99            | 893.23    | 1,080.64  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,812.65 | 3,797.21          | 3,843.01  | 4,635.10  |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,812.65 | 3,797.21          | 3,843.01 | 4,635.10 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4,300.52 | 5,700.01          | 5,754.34 | 6,910.73 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4,040.60 | 5,367.60          | 5,420.44 | 6,513.19 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,966.67 | 2,515.13          | 2,526.40 | 3,007.92 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,064.37 | 2,640.07          | 2,651.90 | 3,157.34 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,062.84 | 2,638.12          | 2,649.93 | 3,155.00 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.04     | 1.34              | 1.34     | 1.60     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 36.73    | 46.97             | 47.18    | 56.17    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.04    | 21.79             | 21.88    | 26.05    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 231.44   | 295.99            | 297.31   | 353.98   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.22    | 18.19             | 18.27    | 21.75    |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 104.31   | 133.47            | 134.08   | 159.65   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,107.95 | 1,417.81          | 1,424.29 | 1,696.02 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,107.95 | 1,417.81          | 1,424.29 | 1,696.02 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,007.95 | 1,289.93          | 1,295.83 | 1,543.08 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,007.95 | 1,289.93          | 1,295.83 | 1,543.08 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.44    | 22.31             | 22.41    | 26.68    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 657.98   | 842.31            | 846.20   | 1,007.73 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 414.29   | 530.43            | 532.89   | 634.64   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |           |           |
|--|-----------------------------|--|---|--|----------|-------------------|-----------|-----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 551.97   | 705.91            | 709.07    | 844.21    |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00      | 0.00      |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 52.56    | 67.22             | 67.52     | 80.39     |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 539.81   | 690.81            | 693.97    | 826.38    |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 39.98    | 51.14             | 51.37     | 61.16     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 223.93   | 286.39            | 287.67    | 342.50    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 11.55    | 14.77             | 14.84     | 17.67     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 778.07   | 995.06            | 999.52    | 1,190.02  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,315.36 | 1,682.18          | 1,689.72  | 2,011.77  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.54     | 1.98              | 1.99      | 2.37      |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 245.88   | 314.46            | 315.87    | 376.08    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 245.88   | 314.46            | 315.87    | 376.08    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 245.88   | 314.46            | 315.87    | 376.08    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 182.31   | 233.15            | 234.19    | 278.83    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 22.31    | 28.53             | 28.66     | 34.12     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 791.33   | 1,012.01          | 1,016.54  | 1,210.29  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 248.26   | 317.49            | 318.91    | 379.69    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 248.26   | 317.49            | 318.91    | 379.69    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 289.98   | 370.85            | 372.51    | 443.51    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 8,810.64 | 11,409.56         | 11,481.07 | 13,711.58 |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |          |                   |          |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 721.50   | 922.83            | 926.98   | 1,103.70 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 172.29   | 220.34            | 221.33   | 263.51   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.36    | 73.36             | 73.69    | 87.73    |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 13.18    | 16.86             | 16.93    | 20.16    |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.92    | 21.64             | 21.74    | 25.88    |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 742.85   | 950.18            | 954.46   | 1,136.43 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 696.09   | 890.33            | 894.34   | 1,064.83 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,380.26 | 1,787.80          | 1,799.06 | 2,148.70 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,380.57 | 1,788.20          | 1,799.47 | 2,149.18 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,360.63 | 1,762.70          | 1,773.85 | 2,118.68 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 141.67   | 181.18            | 181.99   | 216.68   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 130.76   | 189.83            | 193.93   | 237.62   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 967.51   | 1,274.52          | 1,285.58 | 1,541.69 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 572.65   | 754.95            | 761.58   | 913.47   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 572.65   | 754.95            | 761.58   | 913.47   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 323.32   | 413.50            | 415.36   | 494.53   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,884.40 | 2,410.10          | 2,420.92 | 2,882.40 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,888.24 | 2,415.01          | 2,425.85 | 2,888.27 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,886.31 | 2,412.54          | 2,423.37 | 2,885.31 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,911.56 | 5,111.71          | 5,150.33 | 6,164.54 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3,893.22 | 5,088.26          | 5,126.77 | 6,136.48 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,911.56 | 5,111.71          | 5,150.33 | 6,164.54 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3,593.91 | 4,705.48          | 4,742.28 | 5,678.71 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2,488.87 | 3,188.83          | 3,203.96 | 3,816.38 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,488.87 | 3,188.83          | 3,203.96 | 3,816.38 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,488.87 | 3,188.83          | 3,203.96 | 3,816.38 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,488.36 | 3,188.18          | 3,203.30 | 3,815.59 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,488.36 | 3,188.18          | 3,203.30 | 3,815.59 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.02     | 11.43             | 11.83    | 14.81    |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.92     | 5.01              | 5.03     | 5.99     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.53     | 7.08              | 7.11     | 8.46     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 26.62    | 34.04             | 34.20    | 40.71    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 515.66   | 659.55            | 662.51   | 788.81   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 143.14   | 183.06            | 183.88   | 218.93   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1,546.60 | 1,977.91          | 1,986.77 | 2,365.44 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 248.50   | 317.80            | 319.22   | 380.06   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 70.86    | 90.62             | 91.02    | 108.37   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 70.86    | 90.62             | 91.02    | 108.37   |

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
|   |                             | Moderate                                     |   |  |          |                   |          |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 14.61    | 18.68             | 18.77    | 22.34    |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 24.22    | 30.97             | 31.11    | 37.04    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 23.42    | 29.96             | 30.09    | 35.83    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 9.44     | 12.08             | 12.13    | 14.44    |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 279.05   | 356.88            | 358.47   | 426.80   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.56     | 8.39              | 8.43     | 10.04    |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 161.49   | 206.53            | 207.46   | 247.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 166.43   | 212.85            | 213.80   | 254.55   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 596.38   | 762.70            | 766.11   | 912.13   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 93.59    | 119.69            | 120.23   | 143.15   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 196.82   | 343.08            | 357.76   | 453.16   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 488.06   | 624.19            | 626.99   | 746.50   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1,893.05 | 2,554.86          | 2,585.56 | 3,118.23 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1,880.37 | 2,538.64          | 2,569.27 | 3,098.84 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1,880.37 | 2,538.64          | 2,569.27 | 3,098.84 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 120.29   | 153.84            | 154.53   | 183.98   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 36.95    | 47.25             | 47.46    | 56.51    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 74.32    | 98.03             | 98.89    | 118.63   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 74.32    | 98.03             | 98.89    | 118.63   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 74.32    | 98.03             | 98.89    | 118.63   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 203.10 | 259.84            | 261.02 | 310.80   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.67  | 15.55             | 15.71  | 18.90    |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 305.44 | 390.62            | 392.37 | 467.16   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.54  | 16.04             | 16.11  | 19.19    |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 75.79  | 96.93             | 97.36  | 115.92   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 27.55  | 35.23             | 35.39  | 42.13    |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 56.09  | 71.73             | 72.06  | 85.79    |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 40.39  | 51.66             | 51.89  | 61.78    |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 598.68 | 860.22            | 877.68 | 1,073.13 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.82   | 3.61              | 3.62   | 4.31     |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.05   | 3.90              | 3.91   | 4.66     |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 49.20  | 62.92             | 63.20  | 75.25    |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 476.09 | 608.86            | 611.58 | 728.15   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.11  | 23.16             | 23.26  | 27.69    |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.13  | 24.83             | 25.00  | 29.87    |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 223.93 | 286.39            | 287.67 | 342.50   |



**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 151.44   | 193.67            | 194.54   | 231.62   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 699.00   | 1,035.21          | 1,060.17 | 1,304.32 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 413.37   | 528.78            | 531.17   | 632.44   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.92    | 20.36             | 20.45    | 24.34    |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 75.79    | 96.93             | 97.36    | 115.92   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2.30     | 2.94              | 2.95     | 3.51     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 31.27    | 39.99             | 40.17    | 47.83    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 23.69    | 40.79             | 42.48    | 53.70    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.35    | 50.64             | 52.38    | 65.51    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 33.71    | 53.68             | 55.44    | 69.15    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 369.85   | 472.99            | 475.11   | 565.66   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,727.92 | 3,488.75          | 3,504.38 | 4,172.33 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,722.74 | 3,482.12          | 3,497.73 | 4,164.41 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,680.58 | 3,428.20          | 3,443.57 | 4,099.92 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 180.67   | 231.06            | 232.09   | 276.33   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 54.07    | 69.15             | 69.46    | 82.69    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 60.76    | 84.60             | 85.97    | 104.41   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 48.08    | 61.49             | 61.77    | 73.54    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 184.34   | 261.57            | 266.45   | 324.93   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 184.34   | 261.57            | 266.45   | 324.93   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-55. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 207.48 | 265.34            | 266.52 | 317.32 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 130.00 | 166.26            | 167.00 | 198.83 |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 23.24  | 29.72             | 29.85  | 35.54  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 64.33  | 82.27             | 82.64  | 98.39  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 269.15 | 344.21            | 345.75 | 411.65 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 207.32 | 265.14            | 266.32 | 317.09 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 516.18 | 660.13            | 663.09 | 789.47 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 106.95 | 136.78            | 137.39 | 163.58 |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 91.60  | 117.15            | 117.67 | 140.10 |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 258.68   | 326.38            | 326.43   | 383.08   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1,241.61 | 1,564.45          | 1,564.60 | 1,835.54 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,051.06 | 1,324.36          | 1,324.48 | 1,553.84 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 515.61   | 650.47            | 650.56   | 763.44   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 183.15   | 230.77            | 230.79   | 270.76   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 73.83    | 93.08             | 93.09    | 109.23   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.80     | 6.07              | 6.07     | 7.13     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 34.31    | 43.26             | 43.27    | 50.77    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 457.96   | 577.46            | 577.53   | 677.66   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 569.89   | 718.50            | 718.58   | 843.13   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 569.89   | 718.50            | 718.58   | 843.13   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 109.64   | 138.21            | 138.23   | 162.18   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 107.29   | 135.19            | 135.20   | 158.61   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 83.38    | 105.21            | 105.23   | 123.49   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.94     | 6.27              | 6.27     | 7.37     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 54.55    | 68.74             | 68.74    | 80.65    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 209.16   | 263.71            | 263.74   | 309.46   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2,733.05 | 3,618.23          | 3,623.81 | 4,300.51 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.63    | 28.87             | 29.07    | 35.98    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 165.04   | 207.96            | 207.98   | 243.99   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 52.94    | 66.71             | 66.72    | 78.27    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 503.62   | 634.59            | 634.65   | 744.56   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 512.09   | 645.46            | 645.53   | 757.38   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.29    | 24.31             | 24.31    | 28.52    |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.13     | 2.69              | 2.69     | 3.16     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.06    | 17.71             | 17.72    | 20.78    |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5,557.63 | 7,004.90          | 7,005.63 | 8,219.39 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,071.07 | 6,391.83          | 6,392.51 | 7,500.09 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5,561.92 | 7,010.31          | 7,011.04 | 8,225.74 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 44.00    | 55.44             | 55.44    | 65.04    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 431.12   | 551.55            | 551.85   | 649.76   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.48    | 13.25             | 13.25    | 15.56    |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2,470.69 | 3,114.62          | 3,114.96 | 3,654.80 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,435.17 | 3,069.84          | 3,070.18 | 3,602.25 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                    |          |          |
|--|-------------------------------------|--|---|--|----------|--------------------|----------|----------|
|  |                                     |  |   | Alt. 1 – No Action   | Alt. 2   | Alt. 3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,470.69 | 3,114.62           | 3,114.96 | 3,654.80 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,262.75 | 1,872.67           | 1,881.29 | 2,286.42 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,262.75 | 1,872.67           | 1,881.29 | 2,286.42 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,126.42 | 1,767.94           | 1,778.57 | 2,184.81 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.14    | 16.56              | 16.56    | 19.43    |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 37.89    | 47.74              | 47.74    | 56.01    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 249.76   | 314.71             | 314.74   | 369.24   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.33    | 26.87              | 26.88    | 31.53    |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 224.64   | 369.99             | 372.64   | 461.66   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 157.87   | 285.86             | 288.49   | 362.95   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,047.30 | 1,321.10           | 1,321.27 | 1,550.48 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,047.81 | 1,321.74           | 1,321.91 | 1,551.23 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,047.81 | 1,321.74           | 1,321.91 | 1,551.23 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 258.68   | 326.38             | 326.43   | 383.08   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.15    | 12.79              | 12.79    | 15.01    |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 618.76   | 780.16             | 780.25   | 915.51   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4,501.97 | 5,673.09           | 5,673.64 | 6,656.28 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 636.31   | 801.76             | 801.84   | 940.69   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 134.85   | 243.43             | 245.66   | 308.92   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.32     | 0.40               | 0.40     | 0.47     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 840.64   | 1,059.27           | 1,059.38 | 1,242.84 |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.61     | 5.81               | 5.81     | 6.81     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 50.01    | 63.01             | 63.01    | 73.93    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 30.65    | 38.61             | 38.62    | 45.31    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 359.47   | 476.81            | 477.57   | 566.99   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 359.47   | 476.81            | 477.57   | 566.99   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 359.47   | 476.81            | 477.57   | 566.99   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 46.81    | 58.98             | 58.99    | 69.20    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 178.71   | 225.18            | 225.20   | 264.20   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.19     | 2.76              | 2.76     | 3.24     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 301.28   | 379.63            | 379.66   | 445.41   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 301.28   | 379.63            | 379.66   | 445.41   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 301.28   | 379.63            | 379.66   | 445.41   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1,041.45 | 1,312.25          | 1,312.38 | 1,539.64 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2,161.65 | 2,723.73          | 2,723.98 | 3,195.69 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,098.83 | 2,644.58          | 2,644.83 | 3,102.83 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 494.09   | 622.86            | 622.92   | 730.87   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6,043.06 | 7,942.85          | 7,953.46 | 9,423.31 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6,043.06 | 7,942.85          | 7,953.46 | 9,423.31 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6,148.45 | 8,075.65          | 8,086.27 | 9,579.12 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 161.47   | 203.45            | 203.47   | 238.71   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 81.36    | 102.51            | 102.52   | 120.28   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 161.47   | 203.45            | 203.47   | 238.71   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 160.74   | 202.53            | 202.55   | 237.63   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,931.86 | 2,434.73          | 2,434.98 | 2,856.79 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,951.81 | 2,459.87          | 2,460.12 | 2,886.29 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,866.42 | 2,352.28          | 2,352.52 | 2,760.05 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1,300.39 | 1,638.52          | 1,638.68 | 1,922.44 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 251.77   | 317.23            | 317.26   | 372.20   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 215.57   | 271.63            | 271.65   | 318.69   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 778.51   | 980.94            | 981.04   | 1,150.92 |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2,438.82 | 3,072.96          | 3,073.26 | 3,605.44 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,436.52 | 3,070.06          | 3,070.36 | 3,602.04 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2,240.66 | 2,823.28          | 2,823.55 | 3,312.50 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2,221.42 | 2,799.03          | 2,799.30 | 3,284.05 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 33.07    | 41.67             | 41.67    | 48.89    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 445.67   | 562.20            | 562.28   | 659.83   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,727.30 | 2,177.11          | 2,177.34 | 2,554.57 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,727.30 | 2,177.11          | 2,177.34 | 2,554.57 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,558.84 | 1,964.84          | 1,965.05 | 2,305.52 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 59.77    | 75.90             | 75.92    | 89.24    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 58.98    | 74.91             | 74.94    | 88.08    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 565.92   | 713.07            | 713.14   | 836.63   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 774.53   | 975.92            | 976.01   | 1,145.03 |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6,177.39 | 7,791.29          | 7,792.26 | 9,143.78 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6,303.82 | 7,950.60          | 7,951.59 | 9,330.70 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,040.51 | 1,311.29          | 1,311.42 | 1,538.58 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 901.47   | 1,136.10          | 1,136.21 | 1,333.03 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,188.11 | 2,816.14          | 2,818.18 | 3,322.85 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,830.01 | 3,626.05          | 3,628.21 | 4,273.45 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,830.01 | 3,626.05          | 3,628.21 | 4,273.45 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1,089.64 | 1,383.81          | 1,384.27 | 1,627.04 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 350.63   | 452.60            | 452.96   | 534.44   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4,196.44 | 5,298.57          | 5,299.40 | 6,220.17 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4,110.29 | 5,190.01          | 5,190.84 | 6,092.81 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4,110.29 | 5,190.01          | 5,190.84 | 6,092.81 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.01     | 11.35             | 11.35    | 13.32    |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.18    | 38.03             | 38.03    | 44.62    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 33.69    | 42.45             | 42.45    | 49.80    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 10.08    | 12.71             | 12.71    | 14.91    |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 108.11   | 136.22            | 136.24   | 159.83   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 268.47   | 478.22            | 482.47   | 605.45   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.09     | 0.12              | 0.12     | 0.14     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 33.01    | 49.92             | 50.17    | 61.20    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 398.50   | 535.67            | 536.72   | 639.12   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 74.65    | 127.32            | 128.33   | 159.92   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 202.72   | 255.43            | 255.46   | 299.69   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.25     | 4.10              | 4.10     | 4.81     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 195.50   | 246.33            | 246.36   | 289.02   |



**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 240.40   | 302.91            | 302.94   | 355.39   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 313.85   | 395.45            | 395.49   | 463.98   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 31.63    | 51.90             | 52.26    | 64.70    |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 52.14    | 77.73             | 78.10    | 95.02    |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.13     | 1.42              | 1.42     | 1.67     |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 30.98    | 39.04             | 39.04    | 45.80    |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.38     | 4.25              | 4.26     | 4.99     |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 563.56   | 710.09            | 710.16   | 833.14   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 96.03    | 121.00            | 121.01   | 141.96   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 373.78   | 470.97            | 471.02   | 552.58   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 172.55   | 217.42            | 217.44   | 255.09   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 380.93   | 479.97            | 480.02   | 563.14   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 23.80    | 29.99             | 29.99    | 35.18    |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 32.60    | 41.08             | 41.08    | 48.20    |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 448.29   | 565.23            | 565.30   | 663.29   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 768.06   | 967.77            | 967.87   | 1,135.47 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 39.24    | 49.44             | 49.44    | 58.01    |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 28.79    | 52.12             | 52.60    | 66.18    |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1,386.82 | 1,747.43          | 1,747.60 | 2,050.22 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1,387.09 | 1,747.77          | 1,747.94 | 2,050.62 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 317.88   | 401.60            | 401.67   | 471.53   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.76    | 45.14             | 45.15    | 52.99    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 52.50    | 66.15             | 66.16    | 77.62    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 985.58   | 1,241.86          | 1,241.97 | 1,457.04 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 679.42   | 856.09            | 856.17   | 1,004.43 |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.44    | 25.37             | 25.51    | 31.24    |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.25    | 27.65             | 27.79    | 33.92    |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 94.75    | 119.39            | 119.40   | 140.07   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 800.49   | 1,008.81          | 1,008.91 | 1,183.68 |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 751.11   | 946.60            | 946.70   | 1,110.69 |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,050.96 | 1,324.42          | 1,324.55 | 1,553.97 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 928.18   | 1,169.53          | 1,169.64 | 1,372.18 |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.98     | 2.49              | 2.49     | 2.92     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.87     | 2.36              | 2.36     | 2.77     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.87     | 2.36              | 2.36     | 2.77     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 192.29   | 242.29            | 242.31   | 284.27   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.19    | 16.64             | 16.64    | 19.53    |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5,851.24 | 8,036.04          | 8,056.71 | 9,638.81 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,849.19 | 8,033.44          | 8,054.11 | 9,635.76 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 42.68    | 53.77             | 53.78    | 63.09    |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Johnsonville, TN                                      |                             |  |   |  |          |                   |          |          |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 301.25   | 453.10            | 455.34   | 554.91   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 440.49   | 628.54            | 630.81   | 760.76   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 173.97   | 219.21            | 219.23   | 257.19   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 210.62   | 265.39            | 265.42   | 311.38   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 210.62   | 265.39            | 265.42   | 311.38   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 210.36   | 265.05            | 265.08   | 310.98   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 31.32    | 47.78             | 48.04    | 58.70    |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 76.70    | 96.64             | 96.65    | 113.39   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.98     | 1.24              | 1.24     | 1.46     |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2,075.18 | 2,614.77          | 2,615.02 | 3,067.85 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1,601.31 | 2,017.68          | 2,017.88 | 2,367.31 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 378.31   | 476.68            | 476.73   | 559.28   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 8.07     | 10.16             | 10.17    | 11.93    |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 85.17    | 107.31            | 107.32   | 125.91   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 44.81    | 56.48             | 56.49    | 66.27    |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 161.09   | 202.98            | 203.00   | 238.15   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 160.29   | 201.97            | 201.99   | 236.97   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 160.29   | 201.97            | 201.99   | 236.97   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 43.13    | 54.34             | 54.35    | 63.76    |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 123.65   | 155.80            | 155.82   | 182.80   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 52.95    | 66.72             | 66.72    | 78.28    |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.40     | 4.29              | 4.29     | 5.03     |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 93.73    | 118.10            | 118.11   | 138.57   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 100.90   | 127.13            | 127.14   | 149.16   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 100.90   | 127.13            | 127.14   | 149.16   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 39.24    | 49.44             | 49.44    | 58.01    |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.17     | 9.04              | 9.04     | 10.60    |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 580.22   | 731.31            | 731.39   | 858.10   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,538.84 | 1,940.68          | 1,940.91 | 2,277.50 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 118.11   | 148.82            | 148.83   | 174.60   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 71.02    | 97.81             | 98.07    | 117.40   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 71.02    | 97.81             | 98.07    | 117.40   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 19.46    | 24.52             | 24.52    | 28.77    |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.50    | 25.83             | 25.83    | 30.31    |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.48     | 8.16              | 8.16     | 9.57     |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 74.59    | 93.98             | 93.99    | 110.27   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 74.61    | 94.01             | 94.01    | 110.29   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 78.70    | 99.17             | 99.18    | 116.35   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,028.07 | 1,295.39          | 1,295.51 | 1,519.85 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 625.04   | 787.57            | 787.64   | 924.03   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 816.48   | 1,028.78          | 1,028.88 | 1,207.05 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 816.48   | 1,028.78          | 1,028.88 | 1,207.05 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 181.72 | 228.97            | 228.99 | 268.64 |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 56.37  | 71.03             | 71.04  | 83.34  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.72  | 19.81             | 19.81  | 23.24  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 223.28 | 281.33            | 281.36 | 330.08 |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 494.44 | 763.06            | 767.33 | 939.68 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.37  | 37.00             | 37.01  | 43.42  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 372.45 | 609.29            | 613.55 | 759.25 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.56   | 1.96              | 1.96   | 2.30   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.36  | 14.31             | 14.31  | 16.79  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.37   | 8.03              | 8.03   | 9.42   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.94  | 18.82             | 18.83  | 22.09  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 427.95 | 539.24            | 539.29 | 632.68 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 427.95 | 539.24            | 539.29 | 632.68 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 427.95 | 539.24            | 539.29 | 632.68 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 427.95 | 539.24            | 539.29 | 632.68 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.89   | 1.12              | 1.12   | 1.31   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 195.50 | 246.33            | 246.36 | 289.02 |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 529.26 | 666.88            | 666.94 | 782.43 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,296.69  | 1,633.86          | 1,634.02  | 1,916.98  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,309.62  | 1,650.15          | 1,650.31  | 1,936.09  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 30.33     | 38.22             | 38.22     | 44.84     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 158.83    | 287.07            | 289.71    | 364.37    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 465.88    | 775.33            | 781.06    | 969.38    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.40     | 15.63             | 15.63     | 18.33     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.80      | 6.07              | 6.07      | 7.13      |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.80      | 6.07              | 6.07      | 7.13      |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 280.40    | 437.67            | 440.24    | 540.25    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.65      | 4.61              | 4.61      | 5.40      |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 75.97     | 95.72             | 95.73     | 112.31    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 64.18     | 80.87             | 80.88     | 94.88     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.88     | 40.17             | 40.17     | 47.13     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12,811.07 | 16,363.85         | 16,372.05 | 19,269.62 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,138.98  | 1,655.75          | 1,662.52  | 2,012.59  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1,138.98  | 1,655.75          | 1,662.52  | 2,012.59  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 12,823.07 | 16,378.97         | 16,387.17 | 19,287.36 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 12,822.15 | 16,377.81         | 16,386.01 | 19,285.99 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12,819.38 | 16,374.32         | 16,382.53 | 19,281.90 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 12,821.20 | 16,376.61         | 16,384.82 | 19,284.59 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12,811.07 | 16,363.85         | 16,372.05 | 19,269.62 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,035.81  | 1,305.16          | 1,305.29  | 1,531.32  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 999.73    | 1,259.69          | 1,259.81  | 1,477.98  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 87.80     | 110.64            | 110.65    | 129.81    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 522.80    | 806.48            | 810.99    | 993.06    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 195.98    | 246.94            | 246.96    | 289.73    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 195.98    | 246.94            | 246.96    | 289.73    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 408.31    | 720.51            | 726.76    | 910.68    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 67.30     | 84.80             | 84.81     | 99.50     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 99.26     | 125.07            | 125.08    | 146.74    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2,972.06  | 3,744.86          | 3,745.22  | 4,393.77  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 359.69    | 453.22            | 453.26    | 531.75    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 95.12     | 119.85            | 119.86    | 140.62    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 36.99     | 46.61             | 46.62     | 54.69     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 84.55     | 146.88            | 148.10    | 185.12    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 345.45    | 435.27            | 435.32    | 510.70    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 29.31     | 36.94             | 36.94     | 43.34     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 85.61     | 107.87            | 107.88    | 126.56    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 773.31   | 999.15            | 999.98   | 1,180.12 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 886.50   | 1,141.82          | 1,142.68 | 1,347.54 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,039.89 | 1,335.15          | 1,336.02 | 1,574.39 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.72     | 5.95              | 5.95     | 6.98     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.72     | 5.95              | 5.95     | 6.98     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.72     | 5.95              | 5.95     | 6.98     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,362.35 | 1,716.60          | 1,716.76 | 2,014.06 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 979.85   | 1,234.65          | 1,234.77 | 1,448.60 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2,848.20 | 3,763.31          | 3,768.91 | 4,470.74 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 75.52    | 95.61             | 95.63    | 112.32   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 71.98    | 91.12             | 91.14    | 107.04   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 143.71   | 181.10            | 181.11   | 212.48   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 84.29    | 106.21            | 106.22   | 124.61   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 22.65    | 28.54             | 28.54    | 33.48    |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.60     | 5.80              | 5.80     | 6.81     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 26.61    | 33.52             | 33.53    | 39.33    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.23     | 0.29              | 0.29     | 0.35     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.23     | 0.29              | 0.29     | 0.35     |



**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|---|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 35.59     | 44.87             | 44.88     | 52.66     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 139.00    | 175.14            | 175.16    | 205.49    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.38      | 1.74              | 1.74      | 2.04      |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.99      | 11.32             | 11.33     | 13.29     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 17.59     | 22.16             | 22.16     | 26.00     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 152.37    | 191.99            | 192.01    | 225.26    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.94      | 10.01             | 10.01     | 11.74     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 65.41     | 82.41             | 82.42     | 96.69     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1,522.46  | 1,918.92          | 1,919.12  | 2,251.62  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.83      | 3.56              | 3.56      | 4.18      |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 111.53    | 140.53            | 140.54    | 164.88    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 111.33    | 140.28            | 140.29    | 164.58    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.91     | 18.80             | 18.80     | 22.06     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 707.67    | 892.14            | 892.23    | 1,046.87  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.23     | 20.06             | 20.21     | 25.02     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 459.35    | 578.79            | 578.85    | 679.09    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13,161.29 | 16,669.53         | 16,673.69 | 19,585.27 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7,363.41  | 9,345.49          | 9,348.40  | 10,986.24 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13,212.97 | 16,734.76         | 16,738.94 | 19,661.85 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13,184.59 | 16,699.00         | 16,703.17 | 19,619.89 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-------------------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13,161.29 | 16,669.53         | 16,673.69 | 19,585.27 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 46.63     | 58.87             | 58.88     | 69.11     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 39.80     | 50.15             | 50.16     | 58.84     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,327.04  | 1,672.29          | 1,672.46  | 1,962.13  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.89      | 1.12              | 1.12      | 1.31      |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 44.35     | 55.88             | 55.89     | 65.56     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 44.35     | 55.88             | 55.89     | 65.56     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.24     | 25.51             | 25.51     | 29.93     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 82.56     | 104.03            | 104.04    | 122.05    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 161.53    | 203.53            | 203.55    | 238.79    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 80.25     | 101.12            | 101.13    | 118.64    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 33.66     | 42.41             | 42.42     | 49.76     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68      | 0.85              | 0.85      | 1.00      |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 66.58     | 83.89             | 83.90     | 98.43     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 134.00    | 186.74            | 187.30    | 224.77    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 924.86    | 1,255.37          | 1,258.19  | 1,501.44  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4,046.02  | 5,410.83          | 5,420.73  | 6,447.56  |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4,046.02 | 5,410.83          | 5,420.73 | 6,447.56 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6,201.24 | 8,126.46          | 8,136.62 | 9,633.75 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5,829.27 | 7,657.76          | 7,667.87 | 9,083.84 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,839.35 | 3,577.64          | 3,577.98 | 4,197.57 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,983.82 | 3,759.68          | 3,760.03 | 4,411.15 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,981.62 | 3,756.90          | 3,757.26 | 4,407.89 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.19     | 1.51              | 1.51     | 1.77     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 56.34    | 70.99             | 70.99    | 83.29    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 28.72    | 36.19             | 36.19    | 42.46    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 341.41   | 430.19            | 430.23   | 504.73   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.57    | 25.92             | 25.92    | 30.41    |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 136.25   | 171.78            | 171.80   | 201.57   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,602.33 | 2,020.35          | 2,020.58 | 2,370.87 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,602.33 | 2,020.35          | 2,020.58 | 2,370.87 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,458.92 | 1,839.65          | 1,839.86 | 2,158.86 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,458.92 | 1,839.65          | 1,839.86 | 2,158.86 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 25.23    | 31.79             | 31.79    | 37.30    |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 955.51   | 1,205.26          | 1,205.41 | 1,414.51 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 598.41   | 754.96            | 755.06   | 886.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |           |                   |           |           |
|--|-----------------------------|--|---|--|-----------|-------------------|-----------|-----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2    | Alt.3 – Preferred | Alt. 4    | Alt. 5    |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 798.32    | 1,005.90          | 1,005.99  | 1,180.20  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 78.47     | 98.87             | 98.88     | 116.00    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 781.28    | 985.15            | 985.27    | 1,156.09  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 56.18     | 70.80             | 70.81     | 83.07     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 323.87    | 408.09            | 408.13    | 478.81    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00      | 0.00              | 0.00      | 0.00      |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1,125.33  | 1,417.94          | 1,418.07  | 1,663.64  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1,904.08  | 2,399.18          | 2,399.41  | 2,814.91  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.16      | 2.74              | 2.74      | 3.21      |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 355.61    | 448.09            | 448.14    | 525.75    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 355.61    | 448.09            | 448.14    | 525.75    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 355.61    | 448.09            | 448.14    | 525.75    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 258.17    | 325.29            | 325.33    | 381.66    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 40.05     | 50.46             | 50.47     | 59.21     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1,144.49  | 1,442.09          | 1,442.22  | 1,691.97  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 348.68    | 439.35            | 439.39    | 515.48    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 348.68    | 439.35            | 439.39    | 515.48    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 407.30    | 513.21            | 513.26    | 602.14    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 12,761.57 | 16,301.47         | 16,309.67 | 19,196.43 |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |          |                   |          |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,043.70 | 1,315.28          | 1,315.41 | 1,543.25 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 249.19   | 313.98            | 314.01   | 368.38   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 82.96    | 104.53            | 104.54   | 122.65   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 26.12    | 32.91             | 32.92    | 38.62    |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 24.47    | 30.84             | 30.84    | 36.18    |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,042.35 | 1,313.64          | 1,313.77 | 1,541.35 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1,006.74 | 1,268.70          | 1,268.83 | 1,488.60 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,998.24 | 2,553.18          | 2,554.48 | 3,006.80 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,998.44 | 2,553.43          | 2,554.73 | 3,007.09 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,974.71 | 2,523.53          | 2,524.83 | 2,972.00 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 209.34   | 263.78            | 263.80   | 309.49   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 179.62   | 261.64            | 262.72   | 318.16   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,397.56 | 1,819.08          | 1,820.99 | 2,152.71 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 825.76   | 1,075.77          | 1,076.94 | 1,273.38 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 825.76   | 1,075.77          | 1,076.94 | 1,273.38 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 431.26   | 543.43            | 543.48   | 637.60   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2,726.82 | 3,436.14          | 3,436.47 | 4,031.64 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,730.75 | 3,441.09          | 3,441.42 | 4,037.45 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2,729.75 | 3,439.83          | 3,440.16 | 4,035.97 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,653.23 | 7,293.99          | 7,299.81 | 8,612.03 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5,625.32 | 7,258.81          | 7,264.63 | 8,570.75 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5,653.23 | 7,293.99          | 7,299.81 | 8,612.03 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5,190.54 | 6,710.98          | 6,716.74 | 7,928.00 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3,613.94 | 4,562.82          | 4,563.53 | 5,356.37 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,613.94 | 4,562.82          | 4,563.53 | 5,356.37 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,613.94 | 4,562.82          | 4,563.53 | 5,356.37 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,613.41 | 4,562.16          | 4,562.87 | 5,355.59 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,613.41 | 4,562.16          | 4,562.87 | 5,355.59 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.06     | 15.24             | 15.35    | 19.09    |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.88     | 6.15              | 6.15     | 7.22     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.00     | 10.08             | 10.09    | 11.83    |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 39.80    | 50.15             | 50.16    | 58.84    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 745.78   | 939.84            | 939.93   | 1,102.74 |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 207.51   | 261.47            | 261.49   | 306.78   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2,234.69 | 2,815.76          | 2,816.03 | 3,303.67 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 354.88   | 447.15            | 447.20   | 524.64   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 102.47   | 129.12            | 129.13   | 151.49   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 102.47   | 129.12            | 129.13   | 151.49   |

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
|   |                             | Moderate                                     |   |  |          |                   |          |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 21.51    | 27.11             | 27.11    | 31.81    |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 35.03    | 44.14             | 44.14    | 51.79    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 34.63    | 43.63             | 43.64    | 51.19    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 12.71    | 16.01             | 16.01    | 18.79    |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 403.60   | 508.54            | 508.59   | 596.66   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.13    | 12.77             | 12.77    | 14.98    |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 229.96   | 289.75            | 289.78   | 339.96   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 237.20   | 298.87            | 298.90   | 350.66   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 862.54   | 1,086.82          | 1,086.93 | 1,275.15 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 140.62   | 177.19            | 177.21   | 207.89   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 274.66   | 488.83            | 493.16   | 618.79   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 690.97   | 870.68            | 870.76   | 1,021.56 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2,723.27 | 3,640.54          | 3,647.17 | 4,337.68 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2,704.93 | 3,617.43          | 3,624.05 | 4,310.57 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2,704.93 | 3,617.43          | 3,624.05 | 4,310.57 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 173.98   | 219.22            | 219.24   | 257.20   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 56.31    | 70.96             | 70.96    | 83.25    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 107.16   | 139.68            | 139.84   | 165.36   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 107.16   | 139.68            | 139.84   | 165.36   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 107.16   | 139.68            | 139.84   | 165.36   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 285.44 | 359.81            | 359.85   | 422.20   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 14.27  | 18.97             | 19.00    | 22.56    |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 441.76 | 556.63            | 556.68   | 653.08   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.99  | 22.67             | 22.67    | 26.60    |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 109.61 | 138.12            | 138.13   | 162.05   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 27.17  | 34.24             | 34.24    | 40.17    |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 79.38  | 100.02            | 100.03   | 117.35   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 58.42  | 73.61             | 73.62    | 86.37    |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 856.00 | 1,226.35          | 1,230.90 | 1,485.69 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.17   | 5.25              | 5.25     | 6.16     |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 4.38   | 5.52              | 5.53     | 6.48     |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 72.88  | 91.83             | 91.84    | 107.74   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 689.68 | 869.02            | 869.10   | 1,019.60 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 33.13  | 41.75             | 41.75    | 48.98    |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.63  | 35.38             | 35.40    | 41.70    |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 323.87 | 408.09            | 408.13   | 478.81   |



**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 218.73   | 275.61            | 275.63   | 323.37   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 994.94   | 1,474.37          | 1,481.14 | 1,799.82 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 597.85   | 753.50            | 753.58   | 884.13   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 109.61   | 138.12            | 138.13   | 162.05   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.17     | 4.00              | 4.00     | 4.69     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 44.78    | 56.42             | 56.43    | 66.20    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 32.54    | 57.39             | 57.88    | 72.52    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 43.61    | 71.42             | 71.92    | 89.02    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 46.44    | 75.02             | 75.52    | 93.25    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 534.91   | 674.00            | 674.06   | 790.78   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,945.76 | 4,971.86          | 4,972.34 | 5,833.42 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3,938.45 | 4,962.65          | 4,963.12 | 5,822.61 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,877.34 | 4,885.66          | 4,886.12 | 5,732.27 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 255.42   | 321.84            | 321.87   | 377.60   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 81.33    | 102.48            | 102.49   | 120.24   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 108.03   | 146.89            | 147.23   | 175.76   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 71.89    | 90.58             | 90.59    | 106.28   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 263.78   | 372.71            | 373.96   | 450.09   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 263.78   | 372.71            | 373.96   | 450.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-56. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Nitrogen Oxides (NO<sub>x</sub>) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|----------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 299.63 | 377.54            | 377.58 | 442.96   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 196.74 | 247.90            | 247.92 | 290.86   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 35.78  | 45.08             | 45.08  | 52.89    |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 93.50  | 117.81            | 117.82 | 138.23   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 389.27 | 490.49            | 490.54 | 575.48   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 299.85 | 377.81            | 377.85 | 443.28   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 746.55 | 940.67            | 940.76 | 1,103.67 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 155.26 | 195.63            | 195.65 | 229.53   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 131.51 | 165.71            | 165.72 | 194.42   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.22   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.75              | 0.81   | 0.99   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.37   | 0.50              | 0.52   | 0.63   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.19   | 0.26              | 0.28   | 0.34   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.26   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.25              | 0.26   | 0.31   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.19   | 0.25              | 0.26   | 0.31   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.11   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.15   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.02   | 1.38              | 1.47   | 1.80   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.15   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.28   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.26   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.94   | 2.63              | 2.74   | 3.33   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.71   | 2.31              | 2.40   | 2.91   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.94   | 2.63              | 2.74   | 3.34   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.24   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.77   | 1.04              | 1.07   | 1.29   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.76   | 1.02              | 1.05   | 1.27   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.77   | 1.04              | 1.07   | 1.29   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.51   | 0.70              | 0.78   | 0.95   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.51   | 0.70              | 0.78   | 0.95   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.54              | 0.61   | 0.75   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.25   | 0.31   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.17   | 0.22   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.41   | 0.56              | 0.59   | 0.72   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.41   | 0.56              | 0.59   | 0.72   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.41   | 0.56              | 0.59   | 0.72   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.22   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.24   | 0.32              | 0.34   | 0.42   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.59   | 2.15              | 2.24   | 2.73   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.25              | 0.25   | 0.30   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.30   | 0.40              | 0.42   | 0.51   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.19   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.31   | 0.42              | 0.43   | 0.52   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.72   | 0.97              | 1.01   | 1.22   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.69   | 0.94              | 0.97   | 1.18   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.18   | 0.24              | 0.25   | 0.31   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.80   | 2.44              | 2.52   | 3.06   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.80   | 2.44              | 2.52   | 3.06   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.83   | 2.48              | 2.56   | 3.11   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.65   | 0.88              | 0.92   | 1.11   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.66   | 0.89              | 0.93   | 1.13   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.63   | 0.85              | 0.88   | 1.07   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.39   | 0.53              | 0.54   | 0.66   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.25   | 0.30   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.37              | 0.38   | 0.47   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.78   | 1.06              | 1.09   | 1.33   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.78   | 1.06              | 1.09   | 1.33   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.72   | 0.98              | 1.01   | 1.22   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.71   | 0.97              | 1.00   | 1.21   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.27              | 0.29   | 0.36   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.61   | 0.83              | 0.87   | 1.05   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.83              | 0.87   | 1.05   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.55   | 0.74              | 0.77   | 0.94   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.29              | 0.30   | 0.36   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.37              | 0.38   | 0.46   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.98   | 2.69              | 2.76   | 3.35   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.03   | 2.75              | 2.83   | 3.44   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.44              | 0.45   | 0.54   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.28   | 0.38              | 0.39   | 0.47   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.00   | 1.36              | 1.47   | 1.80   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.29   | 1.74              | 1.88   | 2.30   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.29   | 1.74              | 1.88   | 2.30   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.66              | 0.69   | 0.84   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.18   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.42   | 1.92              | 2.00   | 2.43   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.39   | 1.88              | 1.95   | 2.37   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.39   | 1.88              | 1.95   | 2.37   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.13   | 0.17   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.20              | 0.21   | 0.26   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.04   | 0.05   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |



**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.15   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.04   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.21   | 0.28              | 0.30   | 0.36   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.21   | 0.29              | 0.32   | 0.39   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.14   | 0.19              | 0.20   | 0.25   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.22   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.27   | 0.36              | 0.38   | 0.46   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.45   | 0.62              | 0.64   | 0.77   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.62              | 0.63   | 0.77   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.38   | 0.52              | 0.55   | 0.67   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.28   | 0.39              | 0.41   | 0.50   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.36              | 0.37   | 0.45   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.34              | 0.35   | 0.43   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.52              | 0.55   | 0.67   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.41              | 0.42   | 0.51   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.67   | 3.61              | 3.98   | 4.87   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.67   | 3.61              | 3.98   | 4.87   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.18   | 0.22   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.18   | 0.25              | 0.27   | 0.33   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.10   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.10   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.69   | 0.94              | 0.97   | 1.18   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.53   | 0.72              | 0.74   | 0.90   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.23   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.04   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.28              | 0.30   | 0.36   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.77   | 1.04              | 1.13   | 1.39   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.09   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.09   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.42   | 0.57              | 0.61   | 0.74   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.31              | 0.33   | 0.40   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.43              | 0.45   | 0.55   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.32   | 0.43              | 0.45   | 0.55   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.26              | 0.29   | 0.35   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.19              | 0.22   | 0.27   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.21   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.27              | 0.29   | 0.35   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.39   | 0.53              | 0.54   | 0.66   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.40   | 0.54              | 0.55   | 0.66   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.18   | 0.22   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.14   | 0.17   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.64   | 4.94              | 5.01   | 6.07   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.37   | 0.50              | 0.54   | 0.66   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.37   | 0.50              | 0.54   | 0.66   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.65   | 4.95              | 5.02   | 6.08   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3.64   | 4.95              | 5.02   | 6.08   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.64   | 4.94              | 5.02   | 6.08   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.64   | 4.95              | 5.02   | 6.08   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.64   | 4.94              | 5.01   | 6.07   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.37   | 0.51              | 0.53   | 0.65   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.37   | 0.50              | 0.52   | 0.63   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.26   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.16   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.16   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.11   | 0.13   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.88   | 1.19              | 1.21   | 1.47   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.21   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.27   | 0.37              | 0.39   | 0.47   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.47              | 0.50   | 0.61   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.57              | 0.61   | 0.74   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.59              | 0.61   | 0.74   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.43              | 0.44   | 0.53   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.05   | 1.42              | 1.52   | 1.85   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.08              | 0.09   | 0.10   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.48   | 0.65              | 0.67   | 0.81   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.24   | 0.32              | 0.34   | 0.41   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.21              | 0.22   | 0.27   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.27   | 5.79              | 5.97   | 7.26   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2.38   | 3.22              | 3.33   | 4.04   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.26   | 5.78              | 5.96   | 7.23   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.24   | 5.76              | 5.93   | 7.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.27   | 5.79              | 5.97   | 7.26   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.52   | 0.71              | 0.75   | 0.92   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.39              | 0.42   | 0.51   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.28   | 1.73              | 1.81   | 2.21   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.28   | 1.73              | 1.81   | 2.21   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.95   | 2.64              | 2.74   | 3.34   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.83   | 2.48              | 2.58   | 3.14   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.84   | 1.14              | 1.15   | 1.40   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.88   | 1.20              | 1.22   | 1.47   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.88   | 1.20              | 1.22   | 1.47   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.17              | 0.18   | 0.22   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.59   | 0.81              | 0.85   | 1.03   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.59   | 0.81              | 0.85   | 1.03   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.50   | 0.68              | 0.71   | 0.87   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.50   | 0.68              | 0.71   | 0.87   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.40              | 0.41   | 0.50   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.20   | 0.28              | 0.29   | 0.35   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.27   | 0.37              | 0.38   | 0.46   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.29   | 0.39              | 0.41   | 0.50   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.39   | 0.53              | 0.55   | 0.67   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.62   | 0.84              | 0.86   | 1.05   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.12   | 0.17              | 0.18   | 0.21   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.17              | 0.18   | 0.21   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.21   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.42   | 0.56              | 0.59   | 0.72   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.17              | 0.17   | 0.20   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3.63   | 4.92              | 4.99   | 6.05   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.36   | 0.49              | 0.51   | 0.62   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.15   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.33   | 0.44              | 0.45   | 0.54   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.39              | 0.39   | 0.48   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.58   | 0.78              | 0.79   | 0.96   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.58   | 0.78              | 0.79   | 0.96   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.77              | 0.78   | 0.94   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.47   | 0.64              | 0.67   | 0.81   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.36              | 0.38   | 0.46   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.27   | 0.36              | 0.38   | 0.46   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.25   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.88   | 1.20              | 1.23   | 1.50   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.89   | 1.20              | 1.24   | 1.50   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.88   | 1.20              | 1.23   | 1.50   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.63   | 2.21              | 2.25   | 2.73   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.62   | 2.20              | 2.24   | 2.71   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.63   | 2.21              | 2.25   | 2.73   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.49   | 2.02              | 2.07   | 2.50   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1.06   | 1.44              | 1.46   | 1.77   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.44              | 1.46   | 1.77   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.44              | 1.46   | 1.77   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.44              | 1.46   | 1.77   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.06   | 1.44              | 1.46   | 1.77   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.37              | 0.38   | 0.47   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.84   | 1.13              | 1.19   | 1.45   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.24   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.23   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.12   | 0.14   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.30   | 0.41              | 0.43   | 0.52   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.42   | 0.57              | 0.63   | 0.77   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.18   | 1.60              | 1.74   | 2.13   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.18   | 1.59              | 1.74   | 2.12   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.18   | 1.59              | 1.74   | 2.12   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.15   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.29   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.04   | 0.05   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.33              | 0.35   | 0.43   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.26   | 0.36              | 0.38   | 0.46   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |



**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.11   | 0.13   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.31   | 0.42              | 0.46   | 0.57   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.17   | 0.23              | 0.23   | 0.28   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.22              | 0.22   | 0.27   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.23   | 1.66              | 1.70   | 2.07   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.22   | 1.66              | 1.70   | 2.06   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.21   | 1.64              | 1.67   | 2.03   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.15   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.13   | 0.15   |

**Table A-57. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.16   | 0.22              | 0.24   | 0.29   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.13   | 0.18              | 0.20   | 0.24   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.24   | 0.33              | 0.34   | 0.41   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.23   | 13.91             | 15.43  | 20.74  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 43.31  | 64.99             | 71.59  | 96.08  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.80  | 50.18             | 54.20  | 72.44  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 16.94  | 25.23             | 27.42  | 36.70  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.79   | 8.58              | 9.22   | 12.31  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.00   | 2.96              | 3.21   | 4.29   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.62   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.88   | 2.79              | 3.02   | 4.03   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.51  | 21.50             | 23.14  | 30.91  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.90  | 26.50             | 28.45  | 37.98  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 17.90  | 26.50             | 28.45  | 37.98  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.44   | 5.10              | 5.47   | 7.30   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.26   | 4.79              | 5.10   | 6.79   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.58   | 5.47              | 6.24   | 8.43   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.33              | 0.38   | 0.51   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.98   | 2.98              | 3.31   | 4.45   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.04   | 10.51             | 11.48  | 15.38  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 82.60  | 123.63            | 135.54 | 181.73 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.33              | 0.35   | 0.47   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.97   | 8.99              | 9.98   | 13.42  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.09   | 3.18              | 3.59   | 4.84   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.83  | 23.43             | 25.16  | 33.59  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.72  | 23.19             | 24.75  | 32.99  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.62   | 0.92              | 0.99   | 1.33   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.52              | 0.55   | 0.74   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 178.52 | 265.02            | 286.18 | 382.50 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 161.04 | 238.71            | 257.01 | 343.29 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 178.67 | 265.25            | 286.44 | 382.84 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.36   | 2.01              | 2.14   | 2.86   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.24  | 19.64             | 21.20  | 28.33  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.45              | 0.49   | 0.66   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 76.62  | 113.21            | 121.14 | 161.60 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 75.46  | 111.49            | 119.30 | 159.14 |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 76.62  | 113.21            | 121.14 | 161.60 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 31.28  | 47.89             | 54.66  | 73.89  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 31.28  | 47.89             | 54.66  | 73.89  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 22.35  | 34.50             | 39.94  | 54.15  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.37   | 0.55              | 0.59   | 0.79   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.34   | 2.01              | 2.22   | 2.98   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.25   | 12.30             | 13.37  | 17.90  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.70   | 1.04              | 1.13   | 1.51   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.08   | 9.80              | 12.17  | 16.72  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.06   | 5.16              | 6.83   | 9.49   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.88  | 52.05             | 56.74  | 75.99  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 34.94  | 52.14             | 56.84  | 76.13  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 34.94  | 52.14             | 56.84  | 76.13  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.23   | 13.91             | 15.43  | 20.74  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.47              | 0.53   | 0.71   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 20.27  | 30.27             | 33.02  | 44.24  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 144.89 | 215.19            | 232.56 | 310.87 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 19.27  | 28.37             | 30.16  | 40.17  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 1.33              | 1.73   | 2.39   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 27.13  | 40.29             | 43.55  | 58.22  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.34   | 0.46   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.52   | 2.25              | 2.39   | 3.19   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.94   | 1.39              | 1.50   | 2.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.15  | 15.07             | 16.27  | 21.75  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.15  | 15.07             | 16.27  | 21.75  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.15  | 15.07             | 16.27  | 21.75  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.51   | 2.24              | 2.43   | 3.24   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.37   | 7.89              | 8.36   | 11.13  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.64              | 0.70   | 0.93   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.53   | 14.12             | 15.18  | 20.27  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.53   | 14.12             | 15.18  | 20.27  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.53   | 14.12             | 15.18  | 20.27  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 32.03  | 47.26             | 50.43  | 67.24  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 68.24  | 101.13            | 108.84 | 145.36 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 66.06  | 97.89             | 105.34 | 140.69 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.04  | 23.85             | 25.83  | 34.55  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 171.93 | 254.65            | 273.77 | 365.57 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 171.93 | 254.65            | 273.77 | 365.57 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.13 | 259.38            | 278.82 | 372.29 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.98   | 7.35              | 7.84   | 10.46  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.16   | 3.19              | 3.41   | 4.55   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.98   | 7.35              | 7.84   | 10.46  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.91   | 7.25              | 7.74   | 10.32  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 61.38  | 91.00             | 98.00  | 130.91 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 62.09  | 92.06             | 99.15  | 132.45 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 59.30  | 87.90             | 94.65  | 126.42 |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 39.93  | 58.94             | 62.95  | 83.93  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.27  | 15.68             | 17.83  | 24.09  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 7.11   | 10.58             | 11.50  | 15.39  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 24.96  | 37.06             | 40.02  | 53.50  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 76.41  | 113.05            | 121.29 | 161.89 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 76.34  | 112.94            | 121.17 | 161.73 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 70.30  | 104.02            | 111.60 | 148.95 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 69.62  | 103.01            | 110.52 | 147.51 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.09   | 1.63              | 1.76   | 2.36   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.54  | 23.34             | 25.77  | 34.60  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 55.71  | 82.76             | 89.46  | 119.59 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 55.71  | 82.76             | 89.46  | 119.59 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 50.13  | 74.44             | 80.40  | 107.47 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.82   | 2.70              | 2.89   | 3.85   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.23   | 3.30              | 3.54   | 4.72   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.19  | 28.49             | 30.77  | 41.12  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 24.86  | 36.91             | 39.86  | 53.28  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 193.18 | 285.79            | 306.57 | 409.17 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 197.40 | 292.09            | 313.44 | 418.37 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 32.23  | 47.61             | 50.91  | 67.90  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 28.00  | 41.37             | 44.27  | 59.06  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 74.63  | 112.38            | 124.59 | 167.44 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 96.87  | 145.74            | 161.31 | 216.71 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 96.87  | 145.74            | 161.31 | 216.71 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 43.22  | 64.16             | 69.27  | 92.58  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.30   | 12.45             | 13.72  | 18.41  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 133.09 | 197.36            | 212.66 | 284.09 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 130.30 | 193.20            | 208.15 | 278.07 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 130.30 | 193.20            | 208.15 | 278.07 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.48              | 0.53   | 0.72   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.81   | 1.19              | 1.27   | 1.70   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.92   | 1.36              | 1.48   | 1.97   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.31   | 0.45              | 0.48   | 0.64   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.54   | 5.38              | 6.07   | 8.18   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.67   | 4.42              | 5.71   | 7.90   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.45   | 2.28              | 2.71   | 3.70   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.04  | 17.99             | 19.67  | 26.36  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.10   | 1.73              | 2.08   | 2.84   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.31   | 9.32              | 9.98   | 13.31  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.11              | 0.12   | 0.16   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.88   | 8.72              | 9.39   | 12.54  |



**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 7.82   | 11.63             | 12.60  | 16.85  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 10.50  | 15.72             | 17.25  | 23.13  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.69   | 1.08              | 1.29   | 1.75   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 1.37   | 2.11              | 2.42   | 3.28   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.09   | 0.12   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.10   | 1.66              | 1.85   | 2.48   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.21              | 0.23   | 0.32   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 18.45  | 27.45             | 29.78  | 39.84  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.37   | 5.04              | 5.53   | 7.42   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 14.33  | 21.74             | 24.43  | 32.93  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 5.34   | 7.89              | 8.44   | 11.26  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 12.50  | 18.62             | 20.21  | 27.04  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.59   | 0.87              | 0.93   | 1.23   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.05   | 1.55              | 1.68   | 2.24   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 13.91  | 20.50             | 21.81  | 29.05  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 24.67  | 36.62             | 39.55  | 52.86  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.15   | 1.71              | 1.85   | 2.48   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.47   | 0.79              | 1.05   | 1.46   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 43.82  | 64.86             | 69.67  | 93.00  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 43.78  | 64.81             | 69.61  | 92.93  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 10.98  | 16.46             | 18.12  | 24.31  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.34   | 2.03              | 2.27   | 3.06   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.14   | 3.27              | 3.72   | 5.02   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 32.75  | 48.84             | 53.18  | 71.21  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 23.17  | 34.67             | 37.99  | 50.94  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.43   | 0.66              | 0.76   | 1.03   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.45   | 0.69              | 0.80   | 1.09   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.11   | 4.63              | 5.03   | 6.72   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 25.31  | 37.49             | 40.32  | 53.83  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.80  | 35.26             | 37.93  | 50.66  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 34.28  | 51.00             | 55.28  | 73.95  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 29.06  | 43.01             | 46.16  | 61.62  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.18   | 0.25   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.14   | 0.18   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.14   | 0.18   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.01   | 8.90              | 9.54   | 12.73  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.74              | 0.84   | 1.13   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 178.91 | 271.60            | 305.50 | 411.79 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 178.81 | 271.45            | 305.33 | 411.57 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.47   | 2.20              | 2.41   | 3.24   |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 7.05   | 10.81             | 12.36  | 16.71  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 11.99  | 18.22             | 20.53  | 27.69  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.99   | 1.47              | 1.62   | 2.17   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 5.25   | 7.75              | 8.26   | 11.01  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 6.46   | 9.53              | 10.17  | 13.55  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 6.46   | 9.53              | 10.17  | 13.55  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 6.41   | 9.45              | 10.08  | 13.44  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.43   | 2.25              | 2.68   | 3.66   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.34   | 3.46              | 3.68   | 4.91   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.10   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 65.81  | 97.53             | 104.95 | 140.16 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 50.61  | 74.96             | 80.59  | 107.61 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 12.70  | 18.82             | 20.25  | 27.05  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.28              | 0.30   | 0.40   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.14   | 4.74              | 5.28   | 7.11   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.53   | 2.30              | 2.53   | 3.40   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 5.07   | 7.55              | 8.22   | 11.01  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 5.02   | 7.43              | 7.96   | 10.62  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 5.02   | 7.43              | 7.96   | 10.62  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.60   | 2.42              | 2.71   | 3.65   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.02   | 5.97              | 6.47   | 8.65   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.80   | 2.71              | 3.03   | 4.07   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.22              | 0.25   | 0.34   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.97   | 4.40              | 4.73   | 6.32   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.23   | 4.79              | 5.15   | 6.88   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.23   | 4.79              | 5.15   | 6.88   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.15   | 1.71              | 1.85   | 2.48   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.41              | 0.46   | 0.61   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.80  | 27.95             | 30.25  | 40.45  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 55.96  | 84.41             | 93.88  | 126.25 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.60   | 5.30              | 5.64   | 7.51   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.97   | 4.52              | 5.10   | 6.87   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.97   | 4.52              | 5.10   | 6.87   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.60   | 0.88              | 0.94   | 1.26   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.86              | 0.93   | 1.24   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.37              | 0.40   | 0.53   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.79   | 2.67              | 2.90   | 3.88   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.78   | 2.64              | 2.87   | 3.84   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.95   | 2.90              | 3.14   | 4.21   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.83  | 52.07             | 56.96  | 76.35  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 20.43  | 30.40             | 32.97  | 44.11  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 27.15  | 40.49             | 44.09  | 59.03  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.15  | 40.49             | 44.09  | 59.03  |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.95   | 8.86              | 9.61   | 12.86  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.95   | 2.90              | 3.14   | 4.21   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.22              | 0.24   | 0.32   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.85   | 10.10             | 10.78  | 14.37  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.09  | 17.01             | 19.46  | 26.33  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.99   | 1.46              | 1.56   | 2.08   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.18   | 11.17             | 13.08  | 17.78  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.48   | 0.71              | 0.77   | 1.03   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.40              | 0.43   | 0.57   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.74   | 1.09              | 1.16   | 1.54   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 13.14  | 19.39             | 20.68  | 27.57  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.14  | 19.39             | 20.68  | 27.57  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.14  | 19.39             | 20.68  | 27.57  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.14  | 19.39             | 20.68  | 27.57  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.88   | 8.72              | 9.39   | 12.54  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.43  | 25.96             | 28.20  | 37.74  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 39.83  | 58.79             | 62.79  | 83.72  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 40.32  | 59.51             | 63.56  | 84.74  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.91   | 1.34              | 1.43   | 1.91   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.09   | 5.21              | 6.90   | 9.58   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.17   | 6.26              | 6.90   | 9.26   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.35   | 0.52              | 0.57   | 0.76   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.62   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.28   | 0.42              | 0.46   | 0.62   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.41   | 8.29              | 9.50   | 12.85  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.26              | 0.28   | 0.38   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.49   | 3.70              | 4.02   | 5.38   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.20   | 3.32              | 3.68   | 4.94   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.18   | 1.75              | 1.88   | 2.52   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 378.04 | 557.42            | 594.15 | 791.89 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 27.51  | 41.38             | 45.79  | 61.52  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 27.51  | 41.38             | 45.79  | 61.52  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 378.35 | 557.87            | 594.62 | 792.52 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 378.31 | 557.81            | 594.56 | 792.44 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 378.25 | 557.73            | 594.48 | 792.33 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 378.29 | 557.78            | 594.53 | 792.40 |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 378.04 | 557.42            | 594.15 | 791.89 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 33.66  | 50.04             | 54.19  | 72.46  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 32.57  | 48.44             | 52.50  | 70.22  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.77   | 4.12              | 4.48   | 6.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.06  | 15.22             | 17.00  | 22.89  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.97   | 10.48             | 11.59  | 15.56  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.97   | 10.48             | 11.59  | 15.56  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.73   | 4.37              | 5.34   | 7.32   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.17   | 3.20              | 3.39   | 4.51   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.02   | 4.46              | 4.75   | 6.33   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 91.08  | 134.30            | 143.14 | 190.78 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.72  | 17.36             | 18.69  | 24.96  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.89   | 4.26              | 4.53   | 6.04   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.12   | 1.65              | 1.75   | 2.33   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.44   | 0.67              | 0.77   | 1.04   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.39  | 16.98             | 18.45  | 24.70  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.01   | 1.51              | 1.65   | 2.22   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.60   | 3.88              | 4.22   | 5.65   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 23.86  | 35.52             | 38.54  | 51.57  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 28.51  | 42.62             | 46.63  | 62.50  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.02  | 50.94             | 55.88  | 74.93  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.54              | 0.58   | 0.78   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.36   | 0.54              | 0.58   | 0.78   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.36   | 0.54              | 0.58   | 0.78   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 42.63  | 63.06             | 67.62  | 90.25  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.70  | 45.42             | 48.73  | 65.03  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 85.96  | 128.59            | 140.82 | 188.78 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.66   | 4.01              | 4.44   | 5.97   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.55   | 3.84              | 4.26   | 5.72   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.01   | 7.39              | 7.90   | 10.54  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.49   | 3.71              | 4.01   | 5.36   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.65   | 0.95              | 1.01   | 1.34   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.23              | 0.26   | 0.35   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.91   | 1.35              | 1.44   | 1.92   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.03   | 0.04              | 0.05   | 0.07   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.03   | 0.04              | 0.05   | 0.07   |



**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.99   | 1.45              | 1.55   | 2.06   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.02   | 7.56              | 8.39   | 11.28  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.17   | 0.22   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.36   | 0.55              | 0.63   | 0.86   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.69   | 1.05              | 1.20   | 1.62   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.10   | 7.60              | 8.28   | 11.09  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.34              | 0.37   | 0.49   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.87   | 2.75              | 2.92   | 3.89   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.46  | 70.17             | 75.18  | 100.31 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.27              | 0.30   | 0.40   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.66   | 5.38              | 5.72   | 7.61   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.64   | 5.35              | 5.68   | 7.57   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.54   | 0.80              | 0.86   | 1.15   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.50  | 33.36             | 35.93  | 47.99  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.33              | 0.40   | 0.54   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 14.66  | 21.75             | 23.44  | 31.31  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 410.04 | 607.16            | 652.44 | 871.10 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 227.99 | 337.65            | 362.92 | 484.58 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 410.88 | 608.26            | 653.30 | 872.16 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 409.61 | 606.37            | 651.26 | 869.44 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 410.04 | 607.16            | 652.44 | 871.10 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.35   | 1.98              | 2.11   | 2.81   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.20   | 1.79              | 1.93   | 2.59   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 44.30  | 66.13             | 72.15  | 96.64  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.13   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.45   | 2.14              | 2.31   | 3.08   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.45   | 2.14              | 2.31   | 3.08   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.81   | 1.22              | 1.34   | 1.80   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.91   | 4.37              | 4.81   | 6.46   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.27   | 7.85              | 8.51   | 11.38  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.75   | 4.12              | 4.52   | 6.06   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.98   | 1.44              | 1.53   | 2.04   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.14   | 3.15              | 3.35   | 4.46   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.69   | 4.00              | 4.34   | 5.80   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 25.16  | 37.49             | 40.77  | 54.58  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 113.50 | 168.84            | 183.03 | 244.83 |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 113.50 | 168.84             | 183.03 | 244.83 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 180.25 | 267.49             | 288.63 | 385.70 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 168.46 | 250.06             | 269.97 | 360.81 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 87.10  | 128.40             | 136.80 | 182.32 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 91.47  | 134.87             | 143.75 | 191.60 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 91.41  | 134.77             | 143.65 | 191.45 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.29               | 0.36   | 0.49   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03               | 0.03   | 0.04   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.67   | 2.48               | 2.70   | 3.61   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 1.10               | 1.20   | 1.61   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.99  | 16.42              | 17.93  | 24.02  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.67   | 1.00               | 1.09   | 1.45   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.13   | 7.62               | 8.23   | 11.00  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 52.42  | 78.02              | 84.66  | 113.27 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 52.42  | 78.02              | 84.66  | 113.27 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 46.65  | 69.24              | 74.73  | 99.86  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.65  | 69.24              | 74.73  | 99.86  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.89   | 1.33               | 1.47   | 1.98   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 29.48  | 43.58              | 46.68  | 62.28  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 19.07  | 28.28              | 30.47  | 40.71  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 25.40  | 37.66             | 40.55  | 54.17  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.60   | 3.90              | 4.29   | 5.76   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 25.56  | 38.05             | 41.30  | 55.26  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.83   | 2.69              | 2.87   | 3.83   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 9.92   | 14.63             | 15.59  | 20.78  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.70              | 0.75   | 1.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 36.15  | 53.66             | 57.94  | 77.44  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 59.77  | 88.46             | 94.98  | 126.78 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.13   | 0.17   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 11.43  | 16.97             | 18.33  | 24.50  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 11.43  | 16.97             | 18.33  | 24.50  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.43  | 16.97             | 18.33  | 24.50  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 8.72   | 12.97             | 14.04  | 18.77  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.15   | 1.75              | 1.98   | 2.67   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 37.23  | 55.36             | 59.97  | 80.20  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 11.14  | 16.38             | 17.39  | 23.15  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 11.14  | 16.38             | 17.39  | 23.15  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 13.01  | 19.13             | 20.30  | 27.04  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 376.42 | 555.04            | 591.62 | 788.53 |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.46  | 49.65             | 53.59  | 71.61  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.99   | 11.86             | 12.81  | 17.11  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.93   | 4.40              | 4.86   | 6.53   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43   | 0.64              | 0.71   | 0.95   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.81   | 1.21              | 1.31   | 1.76   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 33.53  | 49.43             | 52.67  | 70.19  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 30.53  | 44.95             | 47.79  | 63.66  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 59.18  | 87.30             | 93.14  | 124.16 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 59.20  | 87.33             | 93.17  | 124.20 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 58.17  | 85.81             | 91.54  | 122.03 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.46   | 9.58              | 10.35  | 13.83  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.66   | 7.02              | 7.80   | 10.49  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 41.94  | 62.37             | 67.58  | 90.39  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 24.53  | 36.42             | 39.35  | 52.60  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 24.53  | 36.42             | 39.35  | 52.60  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 15.11  | 22.25             | 23.65  | 31.51  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 85.59  | 126.67            | 135.98 | 181.51 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 85.81  | 126.99            | 136.32 | 181.96 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 85.67  | 126.79            | 136.11 | 181.68 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 164.65 | 243.09            | 259.73 | 346.36 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 163.83 | 241.88            | 258.44 | 344.64 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 164.65 | 243.09            | 259.73 | 346.36 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 150.68 | 222.49            | 237.78 | 317.10 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 109.52 | 161.54            | 172.30 | 229.67 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 109.52 | 161.54            | 172.30 | 229.67 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 109.52 | 161.54            | 172.30 | 229.67 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 109.49 | 161.49            | 172.25 | 229.61 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 109.49 | 161.49            | 172.25 | 229.61 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.22              | 0.24   | 0.33   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.34              | 0.38   | 0.51   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.36              | 0.39   | 0.52   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.20   | 1.79              | 1.93   | 2.59   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 24.22  | 36.01             | 38.99  | 52.15  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.45   | 9.53              | 10.21  | 13.62  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 73.46  | 109.36            | 118.72 | 158.85 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.93  | 17.76             | 19.28  | 25.80  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.61   | 5.43              | 6.00   | 8.05   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 3.61   | 5.43              | 6.00   | 8.05   |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.78   | 1.17              | 1.31   | 1.76   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.11   | 1.64              | 1.76   | 2.36   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.05   | 1.55              | 1.66   | 2.21   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.46   | 0.68              | 0.73   | 0.98   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 12.86  | 19.07             | 20.54  | 27.44  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.33   | 0.49              | 0.54   | 0.73   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 7.56   | 11.21             | 12.09  | 16.15  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 7.78   | 11.55             | 12.45  | 16.64  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 27.74  | 41.19             | 44.49  | 59.46  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 4.21   | 6.24              | 6.73   | 8.99   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.91   | 1.43              | 1.71   | 2.34   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 27.72  | 42.10             | 47.41  | 63.91  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 85.63  | 129.22            | 143.80 | 193.41 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 85.06  | 128.38            | 142.90 | 192.21 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 85.06  | 128.38            | 142.90 | 192.21 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 5.39   | 7.96              | 8.51   | 11.34  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.93   | 2.92              | 3.25   | 4.38   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.75   | 5.69              | 6.39   | 8.61   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.75   | 5.69              | 6.39   | 8.61   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 3.75   | 5.69              | 6.39   | 8.61   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.13   | 13.45             | 14.32  | 19.07  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.64   | 0.96              | 1.08   | 1.46   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 14.49  | 21.57             | 23.42  | 31.33  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.55   | 0.81              | 0.86   | 1.14   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.99   | 6.02              | 6.69   | 9.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.70   | 2.56              | 2.84   | 3.82   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.61   | 3.86              | 4.15   | 5.54   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.32   | 3.54              | 4.01   | 5.41   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 19.94  | 29.81             | 32.64  | 43.75  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.19   | 0.25   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.28   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.18   | 3.22              | 3.45   | 4.60   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.14              | 0.17   | 0.24   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.75  | 33.91             | 36.89  | 49.38  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 1.13              | 1.24   | 1.66   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.52   | 2.40              | 2.87   | 3.91   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.92   | 14.63             | 15.60  | 20.79  |



**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.00   | 10.37             | 11.18  | 14.94  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 22.11  | 33.44             | 37.34  | 50.26  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 18.11  | 26.66             | 28.33  | 37.74  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.86              | 0.94   | 1.26   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.99   | 6.02              | 6.69   | 9.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.19              | 0.22   | 0.29   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.50   | 2.24              | 2.43   | 3.26   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.25              | 0.29   | 0.39   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.50   | 0.74              | 0.82   | 1.10   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.91              | 0.99   | 1.33   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 16.50  | 24.35             | 26.00  | 34.67  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 122.52 | 181.02            | 193.70 | 258.38 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 122.28 | 180.67            | 193.32 | 257.88 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 120.40 | 177.90            | 190.37 | 253.94 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 8.66   | 12.87             | 13.93  | 18.63  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.67   | 4.00              | 4.41   | 5.92   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.60   | 4.00              | 4.62   | 6.26   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.25   | 3.37              | 3.68   | 4.93   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.70   | 10.06             | 11.09  | 14.90  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.70   | 10.06             | 11.09  | 14.90  |

**Table A-58. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.41   | 13.92             | 14.93  | 19.92  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.79   | 8.59              | 9.26   | 12.37  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.10   | 1.65              | 1.82   | 2.44   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 3.21   | 4.82              | 5.30   | 7.11   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 13.31  | 19.92             | 21.84  | 29.28  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 10.49  | 15.74             | 17.35  | 23.29  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 23.50  | 34.79             | 37.36  | 49.87  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 4.73   | 6.98              | 7.44   | 9.92   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 4.45   | 6.64              | 7.24   | 9.70   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 29.38  | 43.19             | 44.12  | 54.65  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 137.46 | 199.65            | 203.62 | 251.73 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 107.44 | 151.16            | 153.50 | 188.73 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 53.82  | 76.47             | 77.76  | 95.77  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.41  | 25.71             | 26.09  | 32.03  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.80   | 9.58              | 9.73   | 11.97  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 1.08              | 1.10   | 1.36   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.06   | 7.14              | 7.25   | 8.92   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 46.13  | 64.55             | 65.50  | 80.46  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 56.93  | 79.36             | 80.49  | 98.80  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 56.93  | 79.36             | 80.49  | 98.80  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 10.95  | 15.26             | 15.47  | 18.99  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.36  | 14.22             | 14.39  | 17.61  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 11.10  | 17.04             | 17.50  | 21.83  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.67   | 1.03              | 1.06   | 1.32   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.27   | 9.23              | 9.43   | 11.68  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.34  | 32.02             | 32.60  | 40.21  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 262.22 | 377.95            | 385.08 | 475.44 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.64   | 0.90              | 0.92   | 1.13   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.92  | 27.84             | 28.44  | 35.24  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.61   | 10.00             | 10.26  | 12.77  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 50.37  | 70.22             | 71.22  | 87.43  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 50.02  | 69.03             | 69.91  | 85.66  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.97   | 2.77              | 2.81   | 3.46   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.30   | 0.41              | 0.41   | 0.51   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.65              | 1.67   | 2.04   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 567.43 | 798.15            | 810.52 | 996.50 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 512.01 | 716.82            | 727.45 | 893.63 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 567.91 | 798.86            | 811.24 | 997.39 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.32   | 5.95              | 6.03   | 7.38   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.22  | 59.32             | 60.23  | 74.03  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.02   | 1.45              | 1.47   | 1.81   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 243.78 | 337.96            | 342.51 | 420.01 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 240.15 | 332.91            | 337.39 | 413.73 |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 243.78 | 337.96            | 342.51 | 420.01 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 98.96  | 152.36            | 156.55 | 195.37 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 98.96  | 152.36            | 156.55 | 195.37 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 70.62  | 111.32            | 114.71 | 143.67 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.23   | 1.71              | 1.74   | 2.13   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.24   | 6.18              | 6.31   | 7.80   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 26.22  | 37.29             | 37.93  | 46.72  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.22   | 3.15              | 3.20   | 3.94   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.87  | 33.61             | 35.12  | 44.73  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.51   | 19.02             | 20.10  | 25.96  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 110.79 | 158.24            | 161.02 | 198.50 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 110.94 | 158.45            | 161.24 | 198.77 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 110.94 | 158.45            | 161.24 | 198.77 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.38  | 43.19             | 44.12  | 54.65  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.07   | 1.58              | 1.62   | 2.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 64.96  | 92.90             | 94.55  | 116.59 |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 460.82 | 649.00            | 659.17 | 810.59 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 61.36  | 84.18             | 85.19  | 104.27 |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.40   | 4.67              | 4.93   | 6.34   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 86.21  | 121.43            | 123.34 | 151.68 |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.60   | 0.83              | 0.84   | 1.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.85   | 6.67              | 6.75   | 8.27   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.03   | 4.25              | 4.32   | 5.30   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 32.27  | 45.38             | 46.08  | 56.65  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 32.27  | 45.38             | 46.08  | 56.65  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 32.27  | 45.38             | 46.08  | 56.65  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.80   | 6.77              | 6.87   | 8.45   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 17.08  | 23.33             | 23.59  | 28.85  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.99   | 1.40              | 1.42   | 1.74   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.30  | 42.34             | 42.95  | 52.75  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 30.30  | 42.34             | 42.95  | 52.75  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.30  | 42.34             | 42.95  | 52.75  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 101.91 | 140.69            | 142.50 | 174.61 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 217.56 | 304.42            | 308.91 | 379.43 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 210.88 | 295.01            | 299.36 | 367.69 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 50.99  | 72.05             | 73.21  | 90.08  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 546.99 | 764.00            | 775.09 | 951.75 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 546.99 | 764.00            | 775.09 | 951.75 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 557.23 | 778.14            | 789.40 | 969.29 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.83  | 21.88             | 22.16  | 27.16  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.33   | 10.12             | 10.25  | 12.57  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.83  | 21.88             | 22.16  | 27.16  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 15.68  | 21.67             | 21.95  | 26.90  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 195.23 | 273.44            | 277.51 | 340.93 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 197.40 | 276.52            | 280.65 | 344.80 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 188.53 | 263.96            | 267.88 | 329.08 |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 127.30 | 175.94            | 178.23 | 218.44   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 32.49  | 49.71             | 51.04  | 63.63    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 22.57  | 32.08             | 32.62  | 40.18    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 79.43  | 111.76            | 113.50 | 139.55   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 243.09 | 338.43            | 343.18 | 421.15   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 242.86 | 338.10            | 342.85 | 420.74   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 223.55 | 311.23            | 315.60 | 387.31   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 221.48 | 308.37            | 312.71 | 383.77   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.45   | 4.87              | 4.95   | 6.09     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 49.47  | 72.09             | 73.56  | 90.98    |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 177.07 | 249.49            | 253.42 | 311.66   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 177.07 | 249.49            | 253.42 | 311.66   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 159.33 | 224.21            | 227.70 | 279.96   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.81   | 8.06              | 8.17   | 10.03    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.53   | 9.07              | 9.19   | 11.27    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 59.87  | 84.24             | 85.55  | 105.18   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 79.08  | 111.27            | 112.99 | 138.93   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 614.37 | 855.08            | 867.05 | 1,064.00 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 627.78 | 874.24            | 886.55 | 1,088.04 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 102.53 | 142.00            | 143.89 | 176.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 89.06  | 123.49            | 125.16 | 153.48 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 236.83 | 347.57            | 354.97 | 439.60 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 307.43 | 449.97            | 459.39 | 568.66 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 307.43 | 449.97            | 459.39 | 568.66 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 128.28 | 180.49            | 183.29 | 225.36 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 29.27  | 42.38             | 43.20  | 53.38  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 423.20 | 593.21            | 602.11 | 739.81 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 414.30 | 580.65            | 589.35 | 724.11 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 414.30 | 580.65            | 589.35 | 724.11 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.02   | 1.51              | 1.55   | 1.92   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.69   | 3.71              | 3.75   | 4.60   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.14   | 4.43              | 4.51   | 5.54   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.98   | 1.36              | 1.37   | 1.68   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.06  | 18.21             | 18.67  | 23.22  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.41   | 16.02             | 16.86  | 21.64  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.18   | 7.03              | 7.30   | 9.22   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 37.32  | 53.58             | 54.57  | 67.33  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.26   | 5.52              | 5.74   | 7.26   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 20.06  | 27.83             | 28.21  | 34.60  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.27   | 0.37              | 0.37   | 0.46   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 19.17  | 26.84             | 27.24  | 33.47  |



**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 24.86  | 35.14             | 35.71  | 43.94  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 33.54  | 48.40             | 49.32  | 60.91  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 2.02   | 3.36              | 3.48   | 4.39   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 4.27   | 6.65              | 6.85   | 8.56   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.22              | 0.23   | 0.28   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.54   | 5.23              | 5.34   | 6.62   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.42   | 0.62              | 0.63   | 0.78   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 58.61  | 83.06             | 84.43  | 103.93 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.58  | 15.28             | 15.57  | 19.23  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 45.39  | 68.11             | 69.76  | 86.71  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 17.00  | 23.54             | 23.85  | 29.24  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 39.73  | 56.36             | 57.30  | 70.56  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.05   | 2.81              | 2.84   | 3.48   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 3.33   | 4.68              | 4.76   | 5.85   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 43.83  | 60.22             | 60.95  | 74.62  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 78.45  | 110.37            | 112.09 | 137.81 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.82   | 5.41              | 5.50   | 6.77   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.46   | 2.92              | 3.09   | 3.99   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 139.15 | 194.03            | 196.80 | 241.59 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 139.09 | 193.96            | 196.73 | 241.49 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 34.84  | 50.52             | 51.51  | 63.67  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.24   | 6.33              | 6.48   | 8.04     |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.77   | 10.36             | 10.63  | 13.26    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 104.03 | 148.32            | 150.90 | 185.96   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 73.57  | 105.95            | 107.93 | 133.24   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.28   | 2.03              | 2.09   | 2.62     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.42   | 2.25              | 2.32   | 2.90     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.89   | 14.04             | 14.27  | 17.58    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 80.48  | 112.44            | 114.08 | 140.09   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 75.66  | 105.80            | 107.35 | 131.85   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 108.94 | 154.18            | 156.70 | 192.86   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 92.55  | 128.94            | 130.77 | 160.50   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.40              | 0.41   | 0.51     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.35              | 0.36   | 0.44     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.23   | 0.35              | 0.36   | 0.44     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 19.13  | 26.60             | 26.97  | 33.09    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.59   | 2.42              | 2.49   | 3.10     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 566.74 | 851.70            | 872.50 | 1,084.70 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 566.46 | 851.30            | 872.10 | 1,084.20 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.66   | 6.73              | 6.86   | 8.47     |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 22.31  | 34.45             | 35.41  | 44.21  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 37.92  | 57.17             | 58.59  | 72.88  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.34   | 4.81              | 4.90   | 6.05   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 16.85  | 23.23             | 23.53  | 28.82  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 20.56  | 28.36             | 28.72  | 35.18  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 20.56  | 28.36             | 28.72  | 35.18  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 20.46  | 28.22             | 28.58  | 35.01  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 4.07   | 6.88              | 7.14   | 9.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.46   | 10.28             | 10.41  | 12.76  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 209.25 | 292.70            | 297.00 | 364.79 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 160.93 | 224.77            | 228.03 | 280.01 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 39.37  | 55.08             | 55.89  | 68.65  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.63   | 0.86              | 0.87   | 1.06   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.95   | 14.73             | 15.06  | 18.68  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.90   | 7.13              | 7.27   | 8.99   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 16.49  | 23.49             | 23.89  | 29.44  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 15.96  | 22.17             | 22.48  | 27.57  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 15.96  | 22.17             | 22.48  | 27.57  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 5.09   | 7.58              | 7.76   | 9.63   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.77  | 18.04             | 18.33  | 22.56  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.85   | 8.66              | 8.86   | 10.99  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.45   | 0.66              | 0.68   | 0.84   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.44   | 13.20             | 13.40  | 16.45  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.23  | 14.29             | 14.50  | 17.81  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.23  | 14.29             | 14.50  | 17.81  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.82   | 5.41              | 5.50   | 6.77   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.86   | 1.28              | 1.31   | 1.63   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 59.76  | 84.37             | 85.72  | 105.46 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 177.43 | 261.74            | 267.49 | 331.54 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 11.44  | 15.73             | 15.92  | 19.49  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.45   | 12.90             | 13.24  | 16.50  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.45   | 12.90             | 13.24  | 16.50  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.90   | 2.63              | 2.66   | 3.26   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.97   | 2.81              | 2.85   | 3.52   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 1.04              | 1.06   | 1.31   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.39   | 9.06              | 9.21   | 11.34  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.35   | 9.01              | 9.16   | 11.27  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.89   | 9.77              | 9.94   | 12.23  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 110.59 | 158.85            | 161.77 | 199.62 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 64.94  | 92.02             | 93.54  | 115.15 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 86.22  | 122.92            | 125.06 | 154.11 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 86.22  | 122.92            | 125.06 | 154.11 |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 18.91  | 26.82             | 27.26  | 33.56  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.05   | 8.58              | 8.72   | 10.74  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.52   | 0.73              | 0.75   | 0.92   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 21.80  | 30.06             | 30.44  | 37.30  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 34.05  | 52.78             | 54.28  | 67.81  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.03   | 4.18              | 4.23   | 5.18   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 21.37  | 34.59             | 35.76  | 44.96  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.25              | 0.26   | 0.32   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.38   | 1.94              | 1.97   | 2.43   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.75   | 1.03              | 1.05   | 1.28   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.00   | 2.74              | 2.78   | 3.40   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 41.81  | 57.69             | 58.42  | 71.58  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 41.81  | 57.69             | 58.42  | 71.58  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 41.81  | 57.69             | 58.42  | 71.58  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 41.81  | 57.69             | 58.42  | 71.58  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.20              | 0.21   | 0.25   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.17  | 26.84             | 27.24  | 33.47  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 55.37  | 78.65             | 79.98  | 98.50  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 126.96   | 175.47            | 177.75   | 217.86   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 128.37   | 177.42            | 179.73   | 220.28   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.92     | 4.05              | 4.10     | 5.03     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 9.64     | 19.21             | 20.30    | 26.20    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.46    | 19.57             | 19.97    | 24.69    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.19     | 1.72              | 1.75     | 2.16     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.76     | 1.08              | 1.10     | 1.36     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.76     | 1.08              | 1.10     | 1.36     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.10    | 26.48             | 27.23    | 34.01    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.49     | 0.71              | 0.72     | 0.89     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.91     | 11.24             | 11.43    | 14.07    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.13     | 10.47             | 10.69    | 13.24    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.51     | 4.91              | 4.98     | 6.11     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,205.76 | 1,661.21          | 1,682.09 | 2,060.39 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 85.73    | 125.61            | 128.26   | 158.79   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 85.73    | 125.61            | 128.26   | 158.79   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,206.81 | 1,662.65          | 1,683.54 | 2,062.17 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1,206.70 | 1,662.50          | 1,683.39 | 2,061.99 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,206.49 | 1,662.21          | 1,683.10 | 2,061.63 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,206.63 | 1,662.41          | 1,683.29 | 2,061.87 |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,205.76 | 1,661.21          | 1,682.09 | 2,060.39 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 106.96   | 151.12            | 153.55   | 188.93   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 103.52   | 146.47            | 148.86   | 183.20   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.97     | 12.75             | 12.96    | 15.97    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.30    | 46.59             | 47.67    | 59.18    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.10    | 32.31             | 32.98    | 40.82    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 22.10    | 32.31             | 32.98    | 40.82    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05     | 0.07              | 0.07     | 0.08     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.43     | 14.66             | 15.28    | 19.40    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.71     | 9.17              | 9.28     | 11.35    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.63     | 13.26             | 13.42    | 16.44    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 289.62   | 398.98            | 403.99   | 494.84   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 36.81    | 51.50             | 52.26    | 64.19    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.20     | 12.64             | 12.79    | 15.66    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.56     | 4.88              | 4.94     | 6.05     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.42     | 2.20              | 2.26     | 2.82     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 36.20    | 51.46             | 52.33    | 64.45    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.19     | 4.61              | 4.69     | 5.80     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 8.60     | 12.25             | 12.46    | 15.35    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 75.83  | 107.50            | 109.28 | 134.54 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 90.53  | 130.04            | 132.43 | 163.41 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 108.14 | 156.03            | 159.00 | 196.35 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.90   | 1.29              | 1.31   | 1.62   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.90   | 1.29              | 1.31   | 1.62   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.90   | 1.29              | 1.31   | 1.62   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 135.61 | 188.67            | 191.30 | 234.74 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 97.66  | 135.96            | 137.86 | 169.19 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 273.20 | 393.10            | 400.42 | 494.23 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.47   | 12.42             | 12.68  | 15.70  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.09   | 11.87             | 12.12  | 15.01  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.16  | 20.99             | 21.27  | 26.07  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.26   | 11.65             | 11.84  | 14.56  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.10   | 2.87              | 2.90   | 3.55   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.52   | 0.78              | 0.80   | 1.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.78   | 3.83              | 3.88   | 4.75   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.07   | 0.12              | 0.13   | 0.16   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.07   | 0.12              | 0.13   | 0.16   |



**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.27     | 4.50              | 4.55     | 5.58     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.91    | 23.39             | 23.89    | 29.60    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25     | 0.36              | 0.37     | 0.46     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.16     | 1.79              | 1.84     | 2.30     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.24     | 3.45              | 3.54     | 4.42     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 16.16    | 23.06             | 23.47    | 28.92    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.75     | 1.08              | 1.10     | 1.36     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.09     | 8.32              | 8.42     | 10.30    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 150.96   | 209.70            | 212.58   | 260.77   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.45     | 0.67              | 0.69     | 0.85     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 11.30    | 15.48             | 15.66    | 19.16    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.26    | 15.42             | 15.60    | 19.09    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.62     | 2.27              | 2.31     | 2.83     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 71.51    | 100.15            | 101.64   | 124.87   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.66     | 1.09              | 1.13     | 1.43     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 46.61    | 65.37             | 66.35    | 81.54    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,304.09 | 1,820.05          | 1,846.25 | 2,266.74 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 725.82   | 1,013.40          | 1,028.05 | 1,262.28 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,306.87 | 1,822.53          | 1,848.57 | 2,269.27 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,303.28 | 1,817.47          | 1,843.43 | 2,262.96 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,304.09 | 1,820.05          | 1,846.25 | 2,266.74 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 4.36     | 5.97              | 6.04     | 7.40     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.95     | 5.57              | 5.65     | 6.95     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 140.88   | 201.47            | 205.05   | 252.83   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15     | 0.20              | 0.21     | 0.25     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.54     | 6.36              | 6.45     | 7.92     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.54     | 6.36              | 6.45     | 7.92     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.41     | 3.50              | 3.57     | 4.41     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.19     | 13.34             | 13.60    | 16.82    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.76    | 23.72             | 24.11    | 29.68    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.70     | 12.54             | 12.77    | 15.77    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04     | 0.08              | 0.08     | 0.10     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.17     | 4.33              | 4.38     | 5.35     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08     | 0.11              | 0.11     | 0.13     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.65     | 9.14              | 9.25     | 11.33    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.39     | 13.31             | 13.53    | 16.65    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 79.93    | 113.71            | 115.65   | 142.46   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 360.65   | 510.44            | 518.79   | 638.52   |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 360.65 | 510.44            | 518.79 | 638.52   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 573.53 | 805.74            | 818.08 | 1,005.57 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 536.33 | 754.12            | 765.77 | 941.41   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 276.70 | 380.96            | 385.71 | 472.40   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 290.81 | 400.63            | 405.65 | 496.88   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 290.60 | 400.33            | 405.35 | 496.51   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.53   | 0.96              | 1.01   | 1.29     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.58   | 7.95              | 8.08   | 9.96     |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.61   | 3.72              | 3.78   | 4.66     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 35.72  | 51.14             | 52.06  | 64.20    |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.14   | 3.03              | 3.08   | 3.79     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.42  | 21.71             | 22.05  | 27.11    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 166.55 | 236.11            | 240.03 | 295.51   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 166.55 | 236.11            | 240.03 | 295.51   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 148.38 | 208.53            | 211.73 | 260.28   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 148.38 | 208.53            | 211.73 | 260.28   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.82   | 4.10              | 4.19   | 5.18     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 94.10  | 130.66            | 132.45 | 162.46   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 60.58  | 84.94             | 86.21  | 105.94   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 80.75    | 113.11            | 114.79   | 141.03   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.44     | 12.27             | 12.51    | 15.47    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 81.24    | 115.22            | 117.14   | 144.23   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 5.64     | 7.77              | 7.87     | 9.64     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 31.57    | 43.51             | 44.06    | 53.97    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.72     | 2.42              | 2.46     | 3.03     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 114.91   | 161.59            | 164.09   | 201.73   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 190.22   | 265.10            | 268.87   | 330.02   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.24     | 0.34              | 0.35     | 0.43     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 36.34    | 51.13             | 51.92    | 63.83    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 36.34    | 51.13             | 51.92    | 63.83    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 36.34    | 51.13             | 51.92    | 63.83    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 27.22    | 38.45             | 39.07    | 48.07    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.03     | 6.10              | 6.25     | 7.78     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 118.31   | 167.24            | 169.94   | 209.12   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 34.46    | 47.15             | 47.69    | 58.35    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 34.46    | 47.15             | 47.69    | 58.35    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 40.24    | 55.06             | 55.70    | 68.14    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1,200.81 | 1,654.44          | 1,675.24 | 2,052.02 |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 106.36 | 149.48            | 151.77 | 186.57 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.41  | 35.72             | 36.26  | 44.58  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.29   | 13.55             | 13.83  | 17.11  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.06   | 2.96              | 3.02   | 3.73   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.57   | 3.66              | 3.72   | 4.58   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 104.50 | 143.90            | 145.70 | 178.45 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 97.16  | 133.30            | 134.90 | 165.11 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 188.58 | 260.18            | 263.50 | 322.84 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 188.62 | 260.24            | 263.56 | 322.92 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 185.79 | 256.33            | 259.60 | 318.06 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.92  | 29.41             | 29.86  | 36.71  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.19  | 20.96             | 21.42  | 26.55  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 133.47 | 188.75            | 191.82 | 236.05 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 77.96  | 109.75            | 111.46 | 137.06 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 77.96  | 109.75            | 111.46 | 137.06 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 45.16  | 61.97             | 62.71  | 76.76  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 272.30 | 379.41            | 384.78 | 472.28 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 272.86 | 380.18            | 385.57 | 473.24 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 272.58 | 379.79            | 385.17 | 472.76 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 524.27 | 725.10            | 734.61 | 900.46 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 521.69 | 721.54            | 731.01 | 896.05 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 524.27 | 725.10            | 734.61 | 900.46 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 479.52 | 663.44            | 672.18 | 823.99 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 349.84 | 482.50            | 488.63 | 598.65 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 349.84 | 482.50            | 488.63 | 598.65 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 349.84 | 482.50            | 488.63 | 598.65 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 349.76 | 482.40            | 488.53 | 598.52 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 349.76 | 482.40            | 488.53 | 598.52 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.39   | 0.59              | 0.61   | 0.76   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.63   | 0.92              | 0.94   | 1.16   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.78   | 1.08              | 1.09   | 1.34   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.95   | 5.57              | 5.65   | 6.95   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 76.97  | 108.75            | 110.50 | 135.96 |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 20.54  | 28.54             | 28.93  | 35.49  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 233.21 | 330.81            | 336.33 | 414.11 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 37.51  | 53.22             | 54.11  | 66.63  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.47  | 16.72             | 17.06  | 21.10  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 11.47  | 16.72             | 17.06  | 21.10  |

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 2.50   | 3.71              | 3.79   | 4.71   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.52   | 4.92              | 4.99   | 6.13   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.38   | 4.71              | 4.77   | 5.86   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.38   | 1.93              | 1.96   | 2.41   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 40.88  | 57.29             | 58.15  | 71.45  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.06   | 1.55              | 1.58   | 1.95   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 23.73  | 33.29             | 33.80  | 41.54  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 24.45  | 34.31             | 34.83  | 42.81  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 88.18  | 124.07            | 125.99 | 154.91 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 13.75  | 19.29             | 19.58  | 24.07  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.85   | 4.77              | 4.95   | 6.25   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 86.54  | 130.28            | 133.50 | 166.01 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 271.51 | 400.93            | 409.80 | 508.01 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 269.70 | 398.42            | 407.25 | 504.89 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 269.70 | 398.42            | 407.25 | 504.89 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 17.14  | 23.73             | 24.04  | 29.47  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.26   | 9.29              | 9.50   | 11.78  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 11.90  | 17.81             | 18.23  | 22.65  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.90  | 17.81             | 18.23  | 22.65  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 11.90  | 17.81             | 18.23  | 22.65  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 28.43  | 39.07             | 39.55  | 48.42  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.80   | 2.69              | 2.76   | 3.42   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 46.05  | 65.31             | 66.40  | 81.75  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.73   | 2.37              | 2.40   | 2.93   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.65  | 18.65             | 19.06  | 23.63  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.60   | 6.78              | 6.93   | 8.59   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.13   | 11.35             | 11.51  | 14.13  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 7.36   | 11.18             | 11.46  | 14.28  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 63.33  | 91.05             | 92.74  | 114.46 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.54              | 0.55   | 0.67   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.43   | 0.59              | 0.60   | 0.73   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.05   | 9.79              | 9.93   | 12.18  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.39              | 0.42   | 0.54   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 72.39  | 103.03            | 104.79 | 129.11 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.80   | 4.02              | 4.09   | 5.05   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.80   | 7.98              | 8.28   | 10.45  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 31.57  | 43.51             | 44.06  | 53.97  |



**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 22.21  | 31.14             | 31.61  | 38.84  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 70.05  | 104.05            | 106.43 | 132.06 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 57.63  | 79.04             | 79.98  | 97.88  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.49   | 3.58              | 3.64   | 4.50   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.65  | 18.65             | 19.06  | 23.63  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.39   | 0.58              | 0.60   | 0.74   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.74   | 6.74              | 6.85   | 8.44   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.77              | 0.79   | 0.99   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.55   | 2.24              | 2.29   | 2.82   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.88   | 2.70              | 2.75   | 3.39   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 52.48  | 72.53             | 73.47  | 90.05  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 389.74 | 540.31            | 547.58 | 671.48 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 389.00 | 539.29            | 546.54 | 670.21 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 383.02 | 531.02            | 538.17 | 659.95 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 26.97  | 38.11             | 38.72  | 47.64  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.66   | 12.58             | 12.83  | 15.86  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.16   | 14.22             | 14.63  | 18.28  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.44   | 10.67             | 10.86  | 13.40  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.24  | 30.94             | 31.56  | 39.04  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 21.24  | 30.94             | 31.56  | 39.04  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-59. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 29.89  | 41.59             | 42.17  | 51.75  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 19.05  | 26.69             | 27.09  | 33.29  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.70   | 5.36              | 5.46   | 6.75   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 10.24  | 14.83             | 15.12  | 18.69  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 42.25  | 60.89             | 62.04  | 76.59  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 33.28  | 48.38             | 49.35  | 61.01  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 74.73  | 104.19            | 105.68 | 129.73 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 15.10  | 20.83             | 21.10  | 25.85  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 14.05  | 20.06             | 20.41  | 25.16  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 42.21  | 61.71             | 61.91  | 75.63  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 196.97 | 284.34            | 285.13 | 347.57 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 154.42 | 215.53            | 215.86 | 261.60 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 77.28  | 108.99            | 109.20 | 132.58 |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 26.48  | 36.68             | 36.72  | 44.44  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.87  | 15.19             | 15.22  | 18.45  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 1.07              | 1.07   | 1.30   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.07   | 7.11              | 7.12   | 8.63   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 66.34  | 92.06             | 92.18  | 111.60 |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 81.90  | 113.20            | 113.34 | 137.12 |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 81.90  | 113.20            | 113.34 | 137.12 |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 15.75  | 21.77             | 21.79  | 26.36  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 14.93  | 20.30             | 20.31  | 24.50  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 15.44  | 23.64             | 23.75  | 29.23  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.92   | 1.41              | 1.42   | 1.75   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.97   | 13.13             | 13.18  | 16.10  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 32.05  | 45.62             | 45.72  | 55.60  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 375.98 | 538.37            | 539.70 | 656.99 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.83   | 1.16              | 1.16     | 1.41     |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 27.08  | 39.62             | 39.75    | 48.57    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.43   | 14.22             | 14.28    | 17.54    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 72.50  | 100.23            | 100.35   | 121.41   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 72.04  | 98.50             | 98.58    | 119.04   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.83   | 3.95              | 3.96     | 4.80     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.30   | 0.41              | 0.41     | 0.49     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.96   | 2.67              | 2.67     | 3.22     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 815.57 | 1,138.06          | 1,139.81 | 1,381.30 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 736.26 | 1,022.29          | 1,023.67 | 1,239.47 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 816.26 | 1,139.04          | 1,140.80 | 1,382.51 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.18   | 8.44              | 8.45     | 10.20    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 60.91  | 84.88             | 85.01    | 103.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.56   | 2.21              | 2.21     | 2.68     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 350.93 | 482.23            | 482.70   | 583.37   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 345.85 | 475.24            | 475.70   | 574.91   |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 350.93 | 482.23            | 482.70 | 583.37   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 140.92 | 216.46            | 217.52 | 267.85   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 140.92 | 216.46            | 217.52 | 267.85   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 100.30 | 158.01            | 158.92 | 196.45   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.89   | 2.60              | 2.61   | 3.15     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.07   | 8.80              | 8.83   | 10.77    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 37.64  | 53.15             | 53.25  | 64.67    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.19   | 4.49              | 4.50   | 5.46     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 26.15  | 47.08             | 47.54  | 59.89    |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.11  | 26.79             | 27.14  | 34.71    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 158.99 | 225.48            | 225.96 | 274.61   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 159.07 | 225.59            | 226.07 | 274.74   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 159.07 | 225.59            | 226.07 | 274.74   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.21  | 61.71             | 61.91  | 75.63    |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.69   | 2.48              | 2.49   | 3.04     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 94.32  | 133.94            | 134.23 | 163.16   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 662.85 | 926.14            | 927.61 | 1,124.40 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 88.50  | 120.28            | 120.35 | 145.16   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.13   | 6.28              | 6.36   | 8.11     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 123.84 | 173.07            | 173.35 | 210.13   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.65   | 0.89              | 0.90   | 1.08     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.99   | 9.52              | 9.53     | 11.50    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.47   | 6.21              | 6.22     | 7.54     |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 46.39  | 64.71             | 64.81    | 78.53    |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 46.39  | 64.71             | 64.81    | 78.53    |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 46.39  | 64.71             | 64.81    | 78.53    |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.90   | 9.65              | 9.66     | 11.71    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 24.62  | 33.29             | 33.31    | 40.14    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.33   | 0.46              | 0.46     | 0.56     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 43.58  | 60.39             | 60.46    | 73.18    |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 43.58  | 60.39             | 60.46    | 73.18    |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 43.58  | 60.39             | 60.46    | 73.18    |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 146.76 | 200.78            | 200.95   | 242.66   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 313.73 | 435.38            | 435.96   | 527.81   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 304.50 | 422.49            | 423.05   | 512.16   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 73.25  | 102.71            | 102.89   | 124.79   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 787.27 | 1,090.41          | 1,091.79 | 1,321.36 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 787.27 | 1,090.41          | 1,091.79 | 1,321.36 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 802.11 | 1,110.70          | 1,112.09 | 1,345.88 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.80  | 31.22             | 31.24    | 37.74    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.49  | 15.73             | 15.74    | 19.01    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.80  | 31.22             | 31.24    | 37.74    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 22.69  | 31.08             | 31.10    | 37.56    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 280.83 | 390.11            | 390.64   | 473.03   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 283.83 | 394.33            | 394.88   | 478.17   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 271.09 | 376.43            | 376.94   | 456.41   |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 183.69 | 251.60            | 251.81   | 304.15   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 46.29  | 70.64             | 70.97    | 87.30    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 32.41  | 45.72             | 45.81    | 55.62    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 114.40 | 159.69            | 159.94   | 193.84   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 349.98 | 483.07            | 483.62   | 584.95   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 349.64 | 482.60            | 483.15   | 584.38   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 321.57 | 443.87            | 444.37   | 537.48   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 318.86 | 440.17            | 440.67   | 533.01   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.90   | 6.86              | 6.87     | 8.33     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 71.11  | 103.00            | 103.30   | 126.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 254.46 | 355.72            | 356.29   | 431.91   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 254.46 | 355.72            | 356.29   | 431.91   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 228.94 | 319.60            | 320.09   | 387.94   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.37   | 11.52             | 11.53    | 13.94    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.26   | 11.37             | 11.38    | 13.76    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 83.16  | 116.08            | 116.26   | 140.91   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 113.82 | 158.87            | 159.12   | 192.84   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 883.96 | 1,219.76          | 1,221.14 | 1,476.92 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 903.21 | 1,247.06          | 1,248.50 | 1,510.17 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 147.59 | 202.61            | 202.80   | 245.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 128.19 | 176.19            | 176.36 | 213.15   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 339.16 | 495.03            | 496.60 | 606.47   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 440.31 | 640.85            | 642.80 | 784.66   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 440.31 | 640.85            | 642.80 | 784.66   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 157.60 | 220.21            | 220.56 | 267.36   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 51.31  | 73.34             | 73.52  | 89.47    |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 608.53 | 846.04            | 847.23 | 1,026.06 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 595.76 | 828.14            | 829.29 | 1,004.31 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 595.76 | 828.14            | 829.29 | 1,004.31 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.49   | 2.19              | 2.20   | 2.69     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.22   | 5.76              | 5.76   | 6.96     |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.99   | 6.99              | 7.00   | 8.49     |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.43   | 1.96              | 1.96   | 2.37     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.09  | 28.72             | 28.84  | 35.40    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.84  | 22.84             | 23.11  | 29.36    |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 5.32   | 9.16              | 9.24   | 11.57    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 52.11  | 74.36             | 74.53  | 90.68    |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.28   | 7.39              | 7.45   | 9.33     |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 28.87  | 39.71             | 39.75  | 48.05    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.47   | 0.64              | 0.64   | 0.78     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 28.44  | 39.51             | 39.56  | 47.90    |



**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 35.71  | 50.10             | 50.18  | 60.87  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 49.00  | 70.27             | 70.45  | 85.78  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 2.60   | 4.37              | 4.41   | 5.50   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 5.95   | 9.27              | 9.32   | 11.51  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.28              | 0.28   | 0.34   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 5.13   | 7.54              | 7.57   | 9.25   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.82              | 0.83   | 1.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 84.18  | 118.39            | 118.61 | 143.93 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.01  | 21.53             | 21.58  | 26.28  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 64.81  | 96.87             | 97.25  | 119.23 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 24.47  | 33.58             | 33.62  | 40.62  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 57.05  | 80.34             | 80.49  | 97.69  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 3.31   | 4.50              | 4.50   | 5.43   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 4.79   | 6.68              | 6.69   | 8.10   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 62.42  | 84.96             | 85.01  | 102.56 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 112.84 | 157.48            | 157.73 | 191.15 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.85   | 8.21              | 8.23   | 9.98   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.01   | 4.12              | 4.17   | 5.33   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 199.73 | 276.16            | 276.50 | 334.53 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 199.77 | 276.22            | 276.55 | 334.60 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 49.92  | 71.94             | 72.14  | 87.91  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.06   | 9.00              | 9.04     | 11.07    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.65   | 14.72             | 14.79    | 18.19    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 149.35 | 211.39            | 211.82   | 257.34   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 105.49 | 150.92            | 151.29   | 184.13   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.66   | 2.64              | 2.66     | 3.29     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.03   | 3.22              | 3.24     | 4.00     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 14.22  | 20.05             | 20.09    | 24.38    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 115.75 | 160.37            | 160.58   | 194.35   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 108.81 | 150.90            | 151.09   | 182.91   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 156.48 | 219.78            | 220.17   | 267.13   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 133.42 | 184.30            | 184.51   | 223.20   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.51              | 0.51     | 0.63     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.32   | 0.49              | 0.49     | 0.60     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.32   | 0.49              | 0.49     | 0.60     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 27.52  | 37.94             | 37.99    | 45.93    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.37   | 3.59              | 3.60     | 4.43     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 809.09 | 1,211.17          | 1,216.05 | 1,491.29 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 808.76 | 1,210.70          | 1,215.58 | 1,490.72 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.68   | 9.59              | 9.61     | 11.71    |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 31.76  | 48.93             | 49.18  | 60.59  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 53.99  | 81.11             | 81.45  | 99.95  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 24.46  | 33.43             | 33.45  | 40.39  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 29.61  | 40.47             | 40.50  | 48.90  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 29.61  | 40.47             | 40.50  | 48.90  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 29.58  | 40.42             | 40.45  | 48.83  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 5.08   | 8.84              | 8.92   | 11.18  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.77  | 14.70             | 14.71  | 17.76  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.24   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 300.93 | 417.44            | 418.00 | 506.03 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 231.46 | 320.59            | 321.00 | 388.49 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 54.88  | 76.15             | 76.25  | 92.31  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.12   | 1.52              | 1.52   | 1.83   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 14.22  | 20.96             | 21.03  | 25.73  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.11   | 10.27             | 10.30  | 12.56  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 24.37  | 34.47             | 34.54  | 41.96  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 22.89  | 31.53             | 31.56  | 38.16  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 22.89  | 31.53             | 31.56  | 38.16  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.31   | 10.84             | 10.88  | 13.32  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 18.35  | 25.72             | 25.77  | 31.25  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.85   | 13.05             | 13.10  | 16.02  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.84              | 0.84   | 1.03   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 13.58  | 18.83             | 18.86  | 22.83  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 14.59  | 20.21             | 20.23  | 24.49  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.59  | 20.21             | 20.23  | 24.49  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.85   | 8.21              | 8.23   | 9.98   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.24   | 1.84              | 1.85   | 2.27   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 85.87  | 120.28            | 120.49 | 146.11 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 253.79 | 372.47            | 373.72 | 456.82 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 16.48  | 22.45             | 22.46  | 27.10  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.62  | 16.39             | 16.47  | 20.30  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.62  | 16.39             | 16.47  | 20.30  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.74   | 3.75              | 3.75   | 4.53   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.09   | 4.36              | 4.37   | 5.30   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.98   | 1.38              | 1.38   | 1.67   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.16  | 15.71             | 15.74  | 19.10  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.16  | 15.71             | 15.74  | 19.10  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.78  | 16.57             | 16.60  | 20.15  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 158.62 | 226.31            | 226.84 | 275.96 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 93.35  | 131.28            | 131.52 | 159.60 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 123.72 | 175.12            | 175.48 | 213.18 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 123.72 | 175.12            | 175.48 | 213.18 |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 27.17  | 38.24             | 38.31  | 46.49  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.43   | 11.86             | 11.88  | 14.42  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.30   | 3.20              | 3.20   | 3.88   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 31.39  | 42.90             | 42.93  | 51.83  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 46.52  | 72.22             | 72.60  | 89.54  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.13   | 5.64              | 5.65   | 6.82   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 27.80  | 45.56             | 45.88  | 57.05  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.40   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.67   | 2.33              | 2.33   | 2.82   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.90   | 1.23              | 1.23   | 1.49   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.07   | 2.81              | 2.81   | 3.39   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 60.21  | 82.32             | 82.38  | 99.47  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 60.21  | 82.32             | 82.38  | 99.47  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 60.21  | 82.32             | 82.38  | 99.47  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 60.21  | 82.32             | 82.38  | 99.47  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.22   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 28.44  | 39.51             | 39.56  | 47.90  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 79.51  | 112.10            | 112.32 | 136.36 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 183.16   | 250.88            | 251.09   | 303.29   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 184.99   | 253.38            | 253.60   | 306.31   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.30     | 5.90              | 5.91     | 7.14     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 13.29    | 27.08             | 27.43    | 35.07    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.68    | 28.43             | 28.51    | 34.75    |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.93     | 2.77              | 2.78     | 3.38     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.74     | 1.07              | 1.07     | 1.30     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.74     | 1.07              | 1.07     | 1.30     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.33    | 37.61             | 37.80    | 46.59    |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.57     | 0.82              | 0.82     | 1.00     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.41    | 16.08             | 16.11    | 19.55    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.46    | 15.27             | 15.32    | 18.71    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.61     | 6.38              | 6.39     | 7.73     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,740.99 | 2,376.72          | 2,378.45 | 2,871.09 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 120.26   | 175.47            | 176.03   | 214.96   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 120.26   | 175.47            | 176.03   | 214.96   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1,742.66 | 2,378.99          | 2,380.72 | 2,873.82 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1,742.53 | 2,378.81          | 2,380.54 | 2,873.61 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,742.15 | 2,378.29          | 2,380.02 | 2,872.98 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,742.40 | 2,378.63          | 2,380.36 | 2,873.40 |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,740.99 | 2,376.72          | 2,378.45 | 2,871.09 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 153.66   | 215.43            | 215.80   | 261.74   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 148.79   | 208.92            | 209.29   | 253.90   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.22    | 18.65             | 18.69    | 22.69    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 43.34    | 64.35             | 64.59    | 79.11    |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.63    | 45.99             | 46.13    | 56.30    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 31.63    | 45.99             | 46.13    | 56.30    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.52    | 20.29             | 20.48    | 25.72    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.28     | 12.57             | 12.57    | 15.15    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.90    | 18.96             | 18.97    | 22.90    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 416.90   | 569.06            | 569.48   | 687.42   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 52.18    | 72.40             | 72.49    | 87.77    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 13.26    | 18.04             | 18.05    | 21.77    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.14     | 6.97              | 6.98     | 8.41     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.13     | 3.29              | 3.30     | 4.07     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 51.98    | 73.34             | 73.48    | 89.22    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.58     | 6.56              | 6.58     | 8.01     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.95    | 18.32             | 18.36    | 22.30    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 108.90 | 153.22            | 153.51 | 186.30 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 129.84 | 185.26            | 185.69 | 225.91 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 155.22 | 222.53            | 223.09 | 271.62 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.72   | 1.02              | 1.02   | 1.24   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.72   | 1.02              | 1.02   | 1.24   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.72   | 1.02              | 1.02   | 1.24   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 195.20 | 269.24            | 269.54 | 325.97 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 140.59 | 194.03            | 194.25 | 234.95 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 392.19 | 560.54            | 561.89 | 683.78 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.15  | 17.73             | 17.78  | 21.71  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 11.58  | 16.89             | 16.95  | 20.69  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 20.36  | 27.94             | 27.96  | 33.78  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.47  | 17.46             | 17.49  | 21.21  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.12   | 4.21              | 4.21   | 5.08   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.82   | 1.23              | 1.24   | 1.52   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.75   | 5.13              | 5.13   | 6.20   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.08   | 0.15              | 0.15   | 0.19   |



**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.97     | 6.78              | 6.78     | 8.19     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.76    | 33.29             | 33.40    | 40.80    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21     | 0.31              | 0.31     | 0.38     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.69     | 2.59              | 2.61     | 3.21     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.30     | 5.07              | 5.10     | 6.28     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 23.14    | 32.78             | 32.85    | 39.92    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.23     | 1.76              | 1.76     | 2.14     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.02     | 12.21             | 12.22    | 14.73    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 217.26   | 299.17            | 299.49   | 362.08   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.49     | 0.73              | 0.73     | 0.89     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 15.45    | 20.96             | 20.97    | 25.29    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.43    | 20.93             | 20.94    | 25.24    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.16     | 3.01              | 3.01     | 3.65     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 102.78   | 142.77            | 142.96   | 173.11   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.92     | 1.52              | 1.53     | 1.91     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 67.01    | 93.21             | 93.34    | 113.06   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,876.57 | 2,597.01          | 2,600.22 | 3,146.51 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,045.75 | 1,447.83          | 1,449.64 | 1,754.33 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,880.80 | 2,600.75          | 2,603.89 | 3,150.49 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,876.61 | 2,594.91          | 2,598.03 | 3,143.39 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,876.57 | 2,597.01          | 2,600.22 | 3,146.51 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 6.45     | 8.75              | 8.76     | 10.56    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.87     | 8.21              | 8.22     | 9.96     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 202.53   | 287.60            | 288.22   | 350.36   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13     | 0.18              | 0.18     | 0.22     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.44     | 8.94              | 8.95     | 10.84    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.44     | 8.94              | 8.95     | 10.84    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.21     | 4.63              | 4.64     | 5.66     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.08    | 18.87             | 18.92    | 23.07    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.07    | 33.82             | 33.88    | 41.10    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.48    | 17.86             | 17.90    | 21.79    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05     | 0.11              | 0.11     | 0.14     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.64     | 6.28              | 6.28     | 7.57     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09     | 0.13              | 0.13     | 0.16     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.29     | 12.65             | 12.66    | 15.28    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.13    | 21.26             | 21.30    | 25.85    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 114.76   | 162.05            | 162.37   | 197.19   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 518.06   | 727.63            | 728.93   | 884.38   |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 518.06 | 727.63            | 728.93   | 884.38   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 824.91 | 1,149.56          | 1,151.28 | 1,394.87 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 771.92 | 1,076.68          | 1,078.32 | 1,306.68 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 397.83 | 542.72            | 543.10   | 655.52   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 418.55 | 571.31            | 571.72   | 690.13   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 418.24 | 570.89            | 571.30   | 689.62   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.69   | 1.29              | 1.31     | 1.66     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.50   | 12.01             | 12.04    | 14.62    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.36   | 6.17              | 6.19     | 7.52     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 52.27  | 74.31             | 74.48    | 90.55    |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.07   | 4.32              | 4.33     | 5.25     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.02  | 27.97             | 28.01    | 33.95    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 239.20 | 336.55            | 337.17   | 409.20   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 239.20 | 336.55            | 337.17   | 409.20   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 213.44 | 297.54            | 297.99   | 361.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 213.44 | 297.54            | 297.99   | 361.06   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.03   | 5.84              | 5.86     | 7.15     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 135.99 | 187.17            | 187.37   | 226.51   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 87.00  | 121.00            | 121.17   | 146.75   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 116.12   | 161.30            | 161.53   | 195.59   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 12.48    | 18.03             | 18.08    | 22.05    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 116.76   | 164.36            | 164.67   | 199.87   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7.89     | 10.77             | 10.78    | 13.01    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 45.47    | 62.09             | 62.13    | 75.01    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 165.16   | 230.41            | 230.76   | 279.64   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 273.89   | 378.47            | 378.91   | 458.40   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.33     | 0.47              | 0.47     | 0.58     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 52.23    | 72.90             | 73.01    | 88.48    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 52.23    | 72.90             | 73.01    | 88.48    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 52.23    | 72.90             | 73.01    | 88.48    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 38.29    | 53.67             | 53.76    | 65.21    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.13     | 10.76             | 10.81    | 13.27    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 169.97   | 238.41            | 238.82   | 289.68   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 48.23    | 65.36             | 65.39    | 78.83    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 48.23    | 65.36             | 65.39    | 78.83    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 56.32    | 76.33             | 76.37    | 92.06    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1,734.16 | 2,367.47          | 2,369.20 | 2,859.94 |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 152.92 | 213.18            | 213.50 | 258.70 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 36.53  | 50.93             | 51.00  | 61.80  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.30  | 19.29             | 19.35  | 23.60  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.05   | 5.79              | 5.80   | 7.06   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.69   | 5.21              | 5.22   | 6.34   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 146.07 | 199.33            | 199.48 | 240.78 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 139.98 | 190.27            | 190.38 | 229.63 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 272.18 | 372.12            | 372.41 | 449.67 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 272.21 | 372.16            | 372.45 | 449.71 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 268.85 | 367.56            | 367.85 | 444.16 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.72  | 42.84             | 42.91  | 52.00  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 19.29  | 28.43             | 28.53  | 34.90  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 192.07 | 269.53            | 270.00 | 327.53 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 112.05 | 156.49            | 156.73 | 189.97 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 112.05 | 156.49            | 156.73 | 189.97 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 60.02  | 81.62             | 81.66  | 98.51  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 391.96 | 541.48            | 542.12 | 655.81 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 392.52 | 542.26            | 542.90 | 656.75 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 392.38 | 542.07            | 542.70   | 656.51   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 755.89 | 1,036.12          | 1,037.03 | 1,252.76 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 751.97 | 1,030.78          | 1,031.69 | 1,246.30 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 755.89 | 1,036.12          | 1,037.03 | 1,252.76 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 690.92 | 947.39            | 948.24   | 1,145.56 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 505.88 | 691.38            | 691.92   | 835.40   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 505.88 | 691.38            | 691.92   | 835.40   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 505.88 | 691.38            | 691.92   | 835.40   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 505.80 | 691.28            | 691.82   | 835.28   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 505.80 | 691.28            | 691.82   | 835.28   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.44   | 0.69              | 0.69     | 0.86     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.14              | 1.14     | 1.40     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.13   | 1.54              | 1.54     | 1.86     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.87   | 8.21              | 8.22     | 9.96     |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 110.59 | 155.03            | 155.30   | 188.36   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 29.63  | 40.81             | 40.85    | 49.39    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 334.58 | 471.04            | 471.92   | 572.79   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 53.19  | 74.92             | 75.06    | 91.11    |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 16.42  | 23.80             | 23.87    | 29.12    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 16.42  | 23.80             | 23.87    | 29.12    |

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 3.63   | 5.37              | 5.39   | 6.60   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 5.07   | 7.02              | 7.03   | 8.50   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.97   | 6.86              | 6.87   | 8.31   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.85   | 2.57              | 2.57   | 3.11   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 58.78  | 81.71             | 81.82  | 99.09  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.62   | 2.34              | 2.35   | 2.87   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 33.58  | 46.74             | 46.81  | 56.70  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 34.64  | 48.22             | 48.29  | 58.49  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 126.74 | 176.90            | 177.18 | 214.72 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 20.53  | 28.58             | 28.62  | 34.67  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.02   | 6.75              | 6.80   | 8.49   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 120.98 | 181.48            | 182.22 | 223.54 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 388.34 | 570.55            | 572.48 | 699.90 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 385.73 | 566.96            | 568.89 | 695.57 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 385.73 | 566.96            | 568.89 | 695.57 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 24.67  | 33.85             | 33.88  | 40.94  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 9.44   | 13.92             | 13.97  | 17.09  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 16.99  | 25.33             | 25.42  | 31.16  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 16.99  | 25.33             | 25.42  | 31.16  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 16.99  | 25.33             | 25.42  | 31.16  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 39.80  | 54.19             | 54.22  | 65.42  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.15   | 3.20              | 3.21   | 3.94   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 66.13  | 93.09             | 93.26  | 113.20 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.48   | 3.35              | 3.36   | 4.04   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.10  | 26.55             | 26.64  | 32.56  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.49   | 6.58              | 6.60   | 8.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.45  | 15.84             | 15.85  | 19.18  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 10.49  | 15.89             | 15.96  | 19.60  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 90.89  | 129.81            | 130.12 | 158.33 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.58   | 0.79              | 0.79   | 0.96   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.62   | 0.84              | 0.84   | 1.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.40  | 14.31             | 14.33  | 17.32  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.56              | 0.56   | 0.72   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 104.09 | 147.07            | 147.37 | 178.98 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.09   | 7.25              | 7.27   | 8.84   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.77   | 11.31             | 11.40  | 14.21  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 45.47  | 62.09             | 62.13  | 75.01  |



**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 31.89  | 44.35             | 44.41  | 53.79  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 100.06 | 147.92            | 148.46 | 181.69 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 83.03  | 112.81            | 112.88 | 136.14 |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.10  | 26.55             | 26.64  | 32.56  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.54   | 0.79              | 0.79   | 0.97   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.74   | 9.51              | 9.53   | 11.57  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61   | 0.98              | 0.99   | 1.23   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.15   | 3.08              | 3.09   | 3.77   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.54   | 3.62              | 3.63   | 4.42   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 75.56  | 103.50            | 103.58 | 125.11 |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 561.03 | 770.95            | 771.70 | 932.65 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 559.99 | 769.53            | 770.28 | 930.93 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 551.37 | 757.71            | 758.45 | 916.64 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 37.88  | 53.10             | 53.19  | 64.51  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.91  | 18.63             | 18.68  | 22.78  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 16.07  | 24.42             | 24.53  | 30.15  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.04  | 15.71             | 15.75  | 19.15  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.43  | 44.05             | 44.17  | 53.87  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 30.43  | 44.05             | 44.17  | 53.87  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-60. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Volatile Organic Compounds (VOC) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 42.95  | 59.25             | 59.31  | 71.73  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 28.65  | 39.83             | 39.88  | 48.30  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.64   | 8.12              | 8.14   | 9.92   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 14.74  | 21.23             | 21.28  | 25.93  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 60.57  | 86.73             | 86.95  | 105.84 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 47.67  | 68.89             | 69.08  | 84.22  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 107.50 | 148.62            | 148.80 | 180.03 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 21.83  | 29.84             | 29.86  | 36.05  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 20.01  | 28.37             | 28.43  | 34.55  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.12  | -0.16  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.10  | -0.14  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.13              | 0.10   | 0.12   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | -0.02  | -0.03  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | -0.03  | -0.04  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | -0.03  | -0.04  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.48              | 0.33   | 0.37   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.29              | 0.31   | 0.38   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.06  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.07  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.02             | -0.44  | -0.60  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.01             | -0.40  | -0.54  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.03  | -0.02             | -0.44  | -0.61  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.31              | 0.30   | 0.37   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.02              | -0.16  | -0.23  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | -0.16  | -0.22  |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | -0.16  | -0.23  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.22   | 5.78              | 6.14   | 7.47   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.22   | 5.78              | 6.14   | 7.47   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.35   | 1.86              | 1.95   | 2.37   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.56              | 0.60   | 0.73   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.41   | 0.57              | 0.61   | 0.74   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.03              | -0.01  | -0.02  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.04  | -0.04             | -0.39  | -0.52  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -0.01  | -0.01             | -0.06  | -0.08  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.08  | -0.11  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.34              | 0.35   | 0.42   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.25   | 0.34              | 0.35   | 0.42   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.25   | 0.34              | 0.35   | 0.42   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.10  | -0.13  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.21  | -0.28  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.04             | -0.20  | -0.27  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | -0.03  | -0.04  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.30   | 4.54              | 4.45   | 5.35   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.30   | 4.54              | 4.45   | 5.35   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.30   | 4.53              | 4.44   | 5.34   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | -0.13  | -0.18  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | -0.13  | -0.18  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | -0.12  | -0.17  |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.02  | -0.02             | -0.12  | -0.17  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.23  | -0.31  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.04  | -0.05             | -0.23  | -0.31  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.22  | -0.29  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.21  | -0.29  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.04              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.17  | -0.22  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.03  | -0.03             | -0.17  | -0.22  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.15  | -0.20  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.06  | -0.08  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.19   | 0.28              | -0.17  | -0.28  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.28              | -0.18  | -0.30  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | -0.07  | -0.10  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | -0.06  | -0.08  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.40   | 0.55              | 0.43   | 0.50   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.58              | 0.41   | 0.47   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.58              | 0.41   | 0.47   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.04   | 0.03   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.09              | -0.22  | -0.32  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | -0.22  | -0.31  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | -0.22  | -0.31  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.09   | 1.50              | 1.60   | 1.95   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.23   | 0.32              | 0.34   | 0.42   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.16              | 0.14   | 0.17   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |



**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.07  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | -0.02  | -0.03  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -0.02  | -0.03             | -0.13  | -0.18  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.03             | -0.13  | -0.18  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.09  | -0.13  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | -0.05  | -0.08  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | -0.05  | -0.07  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.08  | -0.11  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.02             | -0.09  | -0.12  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 6.61   | 9.07              | 9.37   | 11.36  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.61   | 9.07              | 9.37   | 11.36  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.00   | -0.01  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | -0.02  | -0.02  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.34   | 0.42   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.20  | -0.27  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.15  | -0.21  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.05  | -0.06  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | -0.07  | -0.10  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.32              | 0.34   | 0.41   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.32              | 0.34   | 0.41   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.10  | -0.13  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.06  | -0.08  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.08  | -0.11  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.08  | -0.11  |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.09   | 1.50              | 1.59   | 1.93   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.09   | 1.50              | 1.60   | 1.94   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.07  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.12  | -0.17  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.02  | -0.02             | -0.13  | -0.17  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.41   | 0.57              | 0.61   | 0.74   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.28   | 3.12              | 3.34   | 4.07   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.33   | 1.83              | 1.95   | 2.37   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.49   | 4.82              | 4.22   | 5.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 3.64   | 5.00              | 5.30   | 6.44   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 3.64   | 5.00              | 5.30   | 6.44   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.49   | 4.82              | 4.22   | 5.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3.49   | 4.82              | 4.22   | 5.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.49   | 4.82              | 4.22   | 5.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.49   | 4.82              | 4.22   | 5.00   |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.49   | 4.82              | 4.22   | 5.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.10  | -0.13  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.02             | -0.09  | -0.13  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.93   | 4.02              | 4.28   | 5.22   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.93              | 0.99   | 1.21   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.05  | -0.06             | -0.29  | -0.38  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.07   | 0.08   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.03  | -0.04  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.32              | 0.28   | 0.34   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.28   | 0.33   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.31              | 0.26   | 0.31   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.13  | -0.18  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.09  | -0.13  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.34   | 0.48              | 0.32   | 0.36   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | -0.10  | -0.14  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | -0.04  | -0.06  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.06  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.34   | 0.50              | -0.45  | -0.70  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.08   | 0.13              | -0.41  | -0.58  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.34   | 0.51              | -0.45  | -0.71  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.34   | 0.51              | -0.45  | -0.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.34   | 0.50              | -0.45  | -0.70  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | -0.10  | -0.14  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.44              | 0.47   | 0.57   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.28              | 0.24   | 0.28   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.39   | 1.91              | 1.78   | 2.13   |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.39   | 1.91              | 1.78   | 2.13   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.35   | 1.87              | 1.58   | 1.86   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.36   | 1.88              | 1.61   | 1.90   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.05  | -0.05             | -0.27  | -0.37  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.05  | -0.06             | -0.29  | -0.39  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.05  | -0.06             | -0.29  | -0.39  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.03  | -0.04  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.01              | -0.12  | -0.16  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | -0.12  | -0.16  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | -0.10  | -0.14  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | -0.10  | -0.14  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.07  | -0.10  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.04              | 0.00   | -0.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.08  | -0.10  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | -0.01  | -0.02  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.02  | -0.02             | -0.11  | -0.15  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.18  | -0.25  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -0.02  | -0.02             | -0.11  | -0.15  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.04  | -0.06  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3.49   | 4.82              | 4.23   | 5.01   |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | -0.08  | -0.11  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.09  | -0.12  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.13   | 0.19              | 0.06   | 0.05   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.13   | 0.19              | 0.06   | 0.05   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.19              | 0.06   | 0.05   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.57   | 0.78              | 0.82   | 1.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.18   | 1.62              | 1.64   | 1.98   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.77              | 0.76   | 0.92   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.56   | 0.77              | 0.76   | 0.92   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.06  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.04  | -0.04             | -0.26  | -0.34  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.04  | -0.04             | -0.26  | -0.34  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.26  | -0.34  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.35              | -0.03  | -0.10  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.35              | -0.03  | -0.09  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.35              | -0.03  | -0.10  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.25   | 0.36              | 0.01   | -0.04  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.20   | 0.29              | 0.04   | 0.01   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.20   | 0.29              | 0.04   | 0.01   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.20   | 0.29              | 0.04   | 0.01   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.20   | 0.29              | 0.04   | 0.01   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.20   | 0.29              | 0.04   | 0.01   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.01  | -0.01             | -0.06  | -0.09  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -0.04  | -0.04             | -0.22  | -0.29  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.02             | -0.08  | -0.11  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.24   | 0.33              | 0.35   | 0.43   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.76   | 1.05              | 0.95   | 1.13   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.76   | 1.05              | 0.95   | 1.13   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.76   | 1.05              | 0.95   | 1.13   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.64   | 0.88              | 0.94   | 1.15   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.01  | -0.01             | -0.04  | -0.06  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.93   | 4.01              | 4.26   | 5.18   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.07  | -0.09  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.03  | -0.04  |



**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.03  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.66   | 5.02              | 5.34   | 6.49   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | -0.03  | -0.05  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.14   | 0.17   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.18   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.18   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.01  | -0.01             | -0.05  | -0.07  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.06  | -0.07             | -0.38  | -0.51  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.06  | -0.07             | -0.38  | -0.51  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.06  | -0.07             | -0.37  | -0.50  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | -0.01             | -0.03  | -0.03  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.05   | 0.06   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.05   | 0.06   |

**Table A-61. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | -0.02  | -0.02  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.01  | -0.01             | -0.04  | -0.05  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.03  | -0.04  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.01  | -0.01             | -0.07  | -0.10  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.02  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.53  | 22.58             | 22.60  | 29.76  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 72.83  | 105.64            | 104.81 | 137.82 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 61.67  | 89.45             | 88.75  | 116.70 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 33.14  | 48.43             | 49.16  | 64.93  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.75  | 15.59             | 15.46  | 20.34  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.71   | 5.38              | 5.37   | 7.07   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.54   | 0.78              | 0.79   | 1.04   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.49   | 5.07              | 5.06   | 6.66   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.32  | 39.69             | 39.56  | 52.06  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 33.89  | 49.21             | 49.01  | 64.49  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 33.89  | 49.21             | 49.01  | 64.49  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 6.50   | 9.43              | 9.38   | 12.35  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.30   | 9.13              | 9.06   | 11.91  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 5.24   | 7.63              | 7.62   | 10.04  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.48              | 0.48   | 0.64   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.20   | 4.64              | 4.61   | 6.06   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.43  | 18.04             | 17.97  | 23.64  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 152.72 | 222.86            | 225.19 | 297.18 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.48   | 10.14             | 12.33  | 16.79  |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.68   | 14.05             | 13.94  | 18.33  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.11   | 4.51              | 4.47   | 5.88   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 29.52  | 42.82             | 42.48  | 55.86  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.04  | 43.57             | 43.23  | 56.85  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.13   | 1.64              | 1.63   | 2.14   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.99              | 0.98   | 1.29   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 327.66 | 475.49            | 472.40 | 621.38 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 299.11 | 434.08            | 431.32 | 567.36 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 327.92 | 475.86            | 472.78 | 621.87 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.61   | 3.78              | 3.76   | 4.94   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 30.95  | 45.72             | 47.87  | 63.59  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.58   | 0.84              | 0.85   | 1.12   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 146.21 | 212.25            | 211.12 | 277.76 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 144.00 | 209.04            | 207.92 | 273.55 |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 146.21 | 212.25            | 211.12 | 277.76 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 165.27 | 254.55            | 297.77 | 403.19 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 165.27 | 254.55            | 297.77 | 403.19 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 67.96  | 103.34            | 117.09 | 157.71 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.70   | 1.01              | 1.01   | 1.32   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.22   | 3.22              | 3.20   | 4.21   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.66  | 21.26             | 21.09  | 27.73  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.25   | 1.82              | 1.80   | 2.37   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.91  | 24.52             | 28.74  | 38.93  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.83  | 18.61             | 22.87  | 31.21  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.59  | 89.37             | 88.78  | 116.77 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 61.70  | 89.53             | 88.93  | 116.98 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 61.70  | 89.53             | 88.93  | 116.98 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.53  | 22.58             | 22.60  | 29.76  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.50   | 0.73              | 0.72   | 0.95   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 36.40  | 52.91             | 52.83  | 69.56  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 264.60 | 383.91            | 381.22 | 501.38 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 37.27  | 54.06             | 53.63  | 70.53  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.62              | 0.71   | 0.96   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 49.40  | 71.66             | 71.12  | 93.52  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.60              | 0.59   | 0.78   |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.93   | 4.26              | 4.22   | 5.55   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.72   | 2.50              | 2.48   | 3.26   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 25.89  | 38.45             | 40.89  | 54.47  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 25.89  | 38.45             | 40.89  | 54.47  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 25.89  | 38.45             | 40.89  | 54.47  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.75   | 3.98              | 3.95   | 5.20   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 10.49  | 15.21             | 15.09  | 19.85  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.14              | 1.14   | 1.49   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 17.68  | 25.64             | 25.44  | 33.45  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.68  | 25.64             | 25.44  | 33.45  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.68  | 25.64             | 25.44  | 33.45  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 61.10  | 88.62             | 87.92  | 115.61 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 126.18 | 183.01            | 181.57 | 238.76 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 122.20 | 177.25            | 175.85 | 231.24 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 29.29  | 42.53             | 42.32  | 55.68  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 416.20 | 615.55            | 646.91 | 859.98 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 416.20 | 615.55            | 646.91 | 859.98 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 422.32 | 624.43            | 655.71 | 871.56 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.47   | 13.74             | 13.63  | 17.93  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.12   | 5.98              | 5.93   | 7.80   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.47   | 13.74             | 13.63  | 17.93  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.35   | 13.57             | 13.46  | 17.70  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 114.31 | 165.93            | 165.03 | 217.12 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 115.59 | 167.79            | 166.88 | 219.56 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 110.58 | 160.52            | 159.67 | 210.07 |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 75.98  | 110.21            | 109.34 | 143.79 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.77  | 21.43             | 21.26  | 27.95  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.65  | 18.35             | 18.20  | 23.94  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 45.53  | 66.04             | 65.52  | 86.15  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 142.96 | 207.36            | 205.72 | 270.52 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 142.82 | 207.16            | 205.53 | 270.26 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 131.53 | 190.77            | 189.27 | 248.89 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 130.22 | 188.87            | 187.38 | 246.41 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.98   | 2.87              | 2.85   | 3.75   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 26.81  | 39.00             | 39.04  | 51.42  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 101.28 | 146.90            | 145.74 | 191.65 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 101.28 | 146.90            | 145.74 | 191.65 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 91.43  | 132.62            | 131.57 | 173.01 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.08   | 6.00              | 6.20   | 8.21   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.86   | 7.12              | 7.31   | 9.67   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 35.00  | 50.76             | 50.36  | 66.22  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 45.35  | 65.77             | 65.25  | 85.81  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 369.89 | 537.52            | 536.35 | 706.09 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 377.31 | 548.28            | 547.03 | 720.12 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 61.61  | 89.43             | 88.94  | 117.01 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 53.45  | 77.60             | 77.20  | 101.57 |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 134.23 | 196.20            | 199.24 | 263.17 |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.64 | 252.02            | 254.94 | 336.50 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.64 | 252.02            | 254.94 | 336.50 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 82.31  | 119.81            | 120.13 | 158.30 |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 17.25  | 25.43             | 26.47  | 35.12  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 248.47 | 360.83            | 359.28 | 472.78 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 243.42 | 353.50            | 352.00 | 463.22 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 243.42 | 353.50            | 352.00 | 463.22 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.51   | 0.74              | 0.73   | 0.96   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.56   | 2.26              | 2.24   | 2.95   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.66   | 2.41              | 2.39   | 3.14   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.58   | 0.84              | 0.83   | 1.10   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.31   | 7.70              | 7.64   | 10.05  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 32.06  | 50.33             | 61.63  | 84.05  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 8.25   | 12.79             | 15.20  | 20.63  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 24.35  | 35.75             | 36.76  | 48.68  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.33   | 6.68              | 7.84   | 10.62  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.89  | 17.25             | 17.12  | 22.51  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.28   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.84  | 15.73             | 15.60  | 20.52  |



**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 14.11  | 20.46             | 20.30  | 26.69  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 17.97  | 26.07             | 25.87  | 34.01  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 1.97   | 3.01              | 3.45   | 4.65   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 3.08   | 4.62              | 5.04   | 6.75   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 1.77   | 2.56              | 2.54   | 3.34   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.33              | 0.32   | 0.42   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 33.07  | 47.96             | 47.58  | 62.57  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.75   | 8.34              | 8.28   | 10.88  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 21.93  | 31.81             | 31.56  | 41.50  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 10.12  | 14.69             | 14.57  | 19.16  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 22.35  | 32.42             | 32.16  | 42.29  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.14   | 1.66              | 1.65   | 2.16   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.91   | 2.77              | 2.75   | 3.62   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 27.30  | 39.66             | 39.52  | 52.01  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 45.01  | 65.29             | 64.77  | 85.18  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.06   | 2.99              | 2.97   | 3.91   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.97   | 1.52              | 1.87   | 2.55   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 81.66  | 118.44            | 117.51 | 154.52 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 81.60  | 118.35            | 117.42 | 154.40 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 19.35  | 28.17             | 28.25  | 37.23  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.18   | 3.18              | 3.19   | 4.20     |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.08   | 4.47              | 4.43   | 5.83     |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.82  | 83.86             | 83.20  | 109.41   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 39.87  | 57.82             | 57.37  | 75.44    |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.85   | 1.27              | 1.37   | 1.83     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.86   | 1.29              | 1.39   | 1.86     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.54   | 8.04              | 7.97   | 10.48    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 47.39  | 68.80             | 68.42  | 90.01    |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 44.50  | 64.59             | 64.25  | 84.53    |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 62.09  | 90.11             | 89.57  | 117.82   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 54.27  | 78.72             | 78.10  | 102.70   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.33     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.28  | 16.37             | 16.24  | 21.35    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.74   | 1.08              | 1.08   | 1.42     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 464.25 | 696.82            | 762.84 | 1,021.51 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 464.07 | 696.57            | 762.59 | 1,021.17 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.50   | 3.63              | 3.60   | 4.74     |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.10  | 14.68             | 14.65  | 19.29  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 18.34  | 26.63             | 26.51  | 34.89  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.69   | 2.46              | 2.44   | 3.21   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 10.04  | 14.57             | 14.45  | 19.00  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 12.36  | 17.93             | 17.78  | 23.39  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 12.36  | 17.93             | 17.78  | 23.39  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 12.25  | 17.77             | 17.63  | 23.19  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.22   | 12.74             | 15.15  | 20.57  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 4.49   | 6.51              | 6.46   | 8.50   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 121.76 | 176.61            | 175.22 | 230.41 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 93.96  | 136.28            | 135.21 | 177.80 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 23.48  | 34.06             | 33.79  | 44.44  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.37   | 0.54              | 0.54   | 0.71   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 5.00   | 7.25              | 7.19   | 9.46   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.59   | 3.76              | 3.73   | 4.91   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 8.96   | 12.99             | 12.89  | 16.95  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 9.45   | 13.70             | 13.59  | 17.88  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 9.45   | 13.70             | 13.59  | 17.88  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.51   | 3.64              | 3.61   | 4.75   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 7.26   | 10.52             | 10.44  | 13.73  |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.86   | 4.14              | 4.11   | 5.41   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.45   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.50   | 7.98              | 7.91   | 10.41  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.01   | 8.71              | 8.64   | 11.37  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.01   | 8.71              | 8.64   | 11.37  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.06   | 2.99              | 2.97   | 3.91   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.60              | 0.59   | 0.78   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.19  | 49.62             | 49.29  | 64.84  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 91.67  | 133.15            | 132.68 | 174.62 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 6.93   | 10.05             | 9.97   | 13.11  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 11.18  | 17.04             | 19.41  | 26.17  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.18  | 17.04             | 19.41  | 26.17  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.14   | 1.66              | 1.64   | 2.16   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.02   | 1.48              | 1.47   | 1.93   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.63              | 0.63   | 0.83   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.21   | 4.66              | 4.62   | 6.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.18   | 4.61              | 4.57   | 6.01   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.48   | 5.05              | 5.01   | 6.59   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 60.32  | 87.50             | 86.81  | 114.15 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 36.63  | 53.13             | 52.71  | 69.31  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 47.93  | 69.52             | 68.98  | 90.70  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 47.93  | 69.52             | 68.98  | 90.70  |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 10.66  | 15.46             | 15.33  | 20.17  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.48   | 5.05              | 5.01   | 6.59   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.39              | 0.39   | 0.51   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 13.10  | 19.00             | 18.85  | 24.79  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 46.89  | 71.87             | 83.06  | 112.24 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.89   | 2.75              | 2.73   | 3.58   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 40.01  | 61.88             | 73.12  | 99.17  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.88   | 1.28              | 1.27   | 1.66   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.51   | 0.74              | 0.74   | 0.97   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.44   | 2.09              | 2.07   | 2.73   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 25.12  | 36.44             | 36.15  | 47.54  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.12  | 36.44             | 36.15  | 47.54  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 25.12  | 36.44             | 36.15  | 47.54  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 25.12  | 36.44             | 36.15  | 47.54  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.84  | 15.73             | 15.60  | 20.52  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 31.05  | 45.04             | 44.69  | 58.76  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 75.79  | 109.93            | 109.07   | 143.42   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 76.72  | 111.28            | 110.40   | 145.18   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.72   | 2.49              | 2.47     | 3.25     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 11.88  | 18.68             | 22.94    | 31.30    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 72.37  | 112.97            | 136.49   | 185.75   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.59   | 0.86              | 0.85     | 1.12     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.54   | 0.78              | 0.79     | 1.04     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.54   | 0.78              | 0.79     | 1.04     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 45.73  | 71.01             | 84.73    | 115.09   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.43              | 0.42     | 0.56     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.43   | 6.43              | 6.38     | 8.39     |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.60   | 5.22              | 5.18     | 6.81     |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.20   | 3.19              | 3.16     | 4.16     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 829.99 | 1,216.79          | 1,246.58 | 1,649.37 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 150.12 | 230.58            | 267.88   | 362.32   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 150.12 | 230.58            | 267.88   | 362.32   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 830.58 | 1,217.64          | 1,247.43 | 1,650.48 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 830.50 | 1,217.53          | 1,247.32 | 1,650.34 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 830.40 | 1,217.38          | 1,247.17 | 1,650.14 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 830.46 | 1,217.47          | 1,247.26 | 1,650.26 |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 829.99 | 1,216.79          | 1,246.58 | 1,649.37 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 60.81  | 88.20             | 87.52    | 115.09   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 58.64  | 85.06             | 84.40    | 110.99   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.92   | 7.14              | 7.08     | 9.31     |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 99.96  | 155.28            | 185.45   | 251.93   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.50  | 16.68             | 16.55    | 21.76    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.50  | 16.68             | 16.55    | 21.76    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09     | 0.12     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 21.62  | 33.73             | 40.71    | 55.39    |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.24   | 6.15              | 6.10     | 8.02     |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.81   | 8.42              | 8.35     | 10.99    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 174.57 | 253.21            | 251.21   | 330.34   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 21.67  | 31.43             | 31.18    | 41.00    |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.58   | 8.10              | 8.03     | 10.56    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.17   | 3.15              | 3.12     | 4.11     |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.92   | 2.95              | 3.41     | 4.62     |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 20.27  | 29.40             | 29.17    | 38.36    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.72   | 2.49              | 2.48     | 3.25     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.60   | 6.67              | 6.62     | 8.70     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 49.62  | 72.82             | 74.81  | 99.04  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 56.33  | 82.56             | 84.50  | 111.79 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 65.20  | 95.43             | 97.28  | 128.59 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.63   | 0.92              | 0.91   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.63   | 0.92              | 0.91   | 1.20   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.63   | 0.92              | 0.91   | 1.20   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 79.89  | 115.87            | 114.96 | 151.18 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.45  | 83.33             | 82.67  | 108.71 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 159.17 | 232.21            | 234.47 | 309.37 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.89   | 7.15              | 7.29   | 9.64   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.68   | 6.86              | 6.99   | 9.24   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 9.56   | 13.87             | 13.78  | 18.13  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.52   | 6.55              | 6.50   | 8.55   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.27   | 1.84              | 1.82   | 2.40   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.74   | 2.53              | 2.51   | 3.30   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |



**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|---|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.91   | 2.77              | 2.75     | 3.62     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.16   | 11.83             | 11.74    | 15.43    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25     | 0.33     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.51   | 0.74              | 0.73     | 0.97     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.97   | 1.40              | 1.39     | 1.83     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 8.98   | 13.02             | 12.92    | 16.99    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.39   | 0.56              | 0.56     | 0.73     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.65   | 5.30              | 5.26     | 6.92     |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 90.19  | 130.93            | 130.24   | 171.36   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.39              | 0.39     | 0.51     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 7.11   | 10.31             | 10.23    | 13.45    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.07   | 10.25             | 10.17    | 13.37    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.01   | 1.46              | 1.46     | 1.91     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 42.05  | 61.06             | 60.78    | 79.97    |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.80              | 0.91     | 1.23     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 26.96  | 39.10             | 38.79    | 51.01    |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 778.26 | 1,130.74          | 1,127.65 | 1,484.34 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 429.22 | 623.26            | 620.42   | 816.39   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 781.26 | 1,135.11          | 1,132.00 | 1,490.08 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 778.93 | 1,131.73          | 1,128.65 | 1,485.67 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 778.26 | 1,130.74          | 1,127.65 | 1,484.34 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 2.67   | 3.87              | 3.86     | 5.09     |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.19   | 3.18              | 3.15     | 4.14     |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 78.11  | 113.35            | 112.64   | 148.17   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.16     | 0.21     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.67   | 3.87              | 3.84     | 5.05     |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.67   | 3.87              | 3.84     | 5.05     |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.37   | 1.98              | 1.96     | 2.58     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.91   | 7.12              | 7.06     | 9.28     |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.48   | 13.75             | 13.64    | 17.93    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.73   | 6.86              | 6.81     | 8.95     |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.92   | 2.78              | 2.76     | 3.63     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07     | 0.10     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.12   | 5.97              | 5.92     | 7.79     |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 14.13  | 21.63             | 24.94    | 33.68    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 50.80  | 74.43             | 76.13    | 100.70   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 245.42 | 361.03            | 373.62   | 495.27   |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 245.42 | 361.03            | 373.62 | 495.27 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 371.36 | 543.70            | 554.84 | 733.57 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 349.12 | 511.44            | 522.84 | 691.49 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 167.17 | 242.48            | 240.56 | 316.34 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.32 | 254.29            | 252.29 | 331.76 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 175.19 | 254.11            | 252.10 | 331.51 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.95   | 4.28              | 4.25   | 5.59   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.31   | 1.89              | 1.88   | 2.47   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 19.20  | 27.85             | 27.63  | 36.33  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.21   | 1.75              | 1.74   | 2.28   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.50   | 13.80             | 13.75  | 18.10  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 94.63  | 137.35            | 136.55 | 179.64 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 94.63  | 137.35            | 136.55 | 179.64 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 86.08  | 124.96            | 124.25 | 163.46 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 86.08  | 124.96            | 124.25 | 163.46 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.48   | 2.15              | 2.13   | 2.80   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 55.85  | 81.04             | 80.54  | 105.94 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 36.19  | 52.63             | 52.63  | 69.31  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-----------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 46.84  | 67.94             | 67.41    | 88.64    |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 4.35   | 6.32              | 6.27     | 8.24     |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 46.94  | 68.24             | 68.16    | 89.75    |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 3.53   | 5.12              | 5.10     | 6.70     |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 19.03  | 27.61             | 27.40    | 36.04    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.85   | 1.24              | 1.23     | 1.61     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 66.03  | 95.77             | 95.02    | 124.95   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 111.54 | 161.78            | 160.50   | 211.06   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.21              | 0.21     | 0.28     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 20.89  | 30.30             | 30.07    | 39.54    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 20.89  | 30.30             | 30.07    | 39.54    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 20.89  | 30.30             | 30.07    | 39.54    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.75  | 22.85             | 22.67    | 29.81    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.71   | 2.48              | 2.46     | 3.24     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 67.15  | 97.40             | 96.64    | 127.08   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 21.67  | 31.44             | 31.19    | 41.01    |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 21.67  | 31.44             | 31.19    | 41.01    |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 25.32  | 36.72             | 36.43    | 47.91    |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 826.83 | 1,212.21          | 1,242.04 | 1,643.40 |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 61.42  | 89.12             | 88.50  | 116.40 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.62  | 21.21             | 21.04  | 27.67  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.87   | 7.06              | 7.00   | 9.21   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.74   | 1.08              | 1.07   | 1.41   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.44   | 2.08              | 2.07   | 2.72   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 64.86  | 94.13             | 93.58  | 123.11 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 59.21  | 85.90             | 85.28  | 112.16 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 117.78 | 171.42            | 171.83 | 226.42 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 117.82 | 171.48            | 171.89 | 226.49 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 115.84 | 168.60            | 169.03 | 222.73 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.80  | 17.11             | 16.98  | 22.32  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.87  | 36.62             | 42.42  | 57.35  |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 109.95 | 163.68            | 175.23 | 233.72 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 61.03  | 90.51             | 95.90  | 127.67 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 61.03  | 90.51             | 95.90  | 127.67 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 29.27  | 42.46             | 42.14  | 55.41  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 159.96 | 232.03            | 230.25 | 302.80 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 160.36 | 232.61            | 230.83 | 303.56 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 160.11 | 232.26            | 230.48 | 303.09 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 322.22 | 468.53            | 468.36 | 616.79 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 320.64 | 466.24            | 466.09 | 613.81 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 322.22 | 468.53            | 468.36 | 616.79 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 295.42 | 429.66            | 429.80 | 566.08 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 216.81 | 315.38            | 315.68 | 415.83 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 216.81 | 315.38            | 315.68 | 415.83 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 216.81 | 315.38            | 315.68 | 415.83 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 216.75 | 315.30            | 315.60 | 415.72 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 216.75 | 315.30            | 315.60 | 415.72 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.41   | 0.62              | 0.69   | 0.92   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.38   | 0.56              | 0.55   | 0.73   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.68              | 0.68   | 0.89   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.19   | 3.18              | 3.15   | 4.14   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 43.90  | 63.70             | 63.25  | 83.19  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12.12  | 17.58             | 17.44  | 22.94  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 131.35 | 190.52            | 189.01 | 248.55 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.31  | 30.91             | 30.66  | 40.32  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 6.01   | 8.72              | 8.65   | 11.38  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 6.01   | 8.72              | 8.65   | 11.38  |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.22   | 1.77              | 1.76   | 2.31   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 2.06   | 2.98              | 2.96   | 3.89   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 1.95   | 2.83              | 2.81   | 3.70   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.85   | 1.23              | 1.22   | 1.60   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 23.68  | 34.35             | 34.08  | 44.81  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 13.88  | 20.13             | 19.97  | 26.26  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 14.29  | 20.73             | 20.57  | 27.05  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 50.61  | 73.41             | 72.83  | 95.77  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 7.73   | 11.21             | 11.12  | 14.62  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 7.76   | 12.10             | 14.56  | 19.80  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 42.04  | 60.98             | 60.50  | 79.56  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 160.47 | 235.56            | 242.27 | 320.79 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 159.39 | 234.00            | 240.72 | 318.75 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 159.39 | 234.00            | 240.72 | 318.75 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 10.21  | 14.81             | 14.69  | 19.32  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 3.06   | 4.44              | 4.41   | 5.79   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.09   | 8.87              | 8.91   | 11.75  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 6.09   | 8.87              | 8.91   | 11.75  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 6.09   | 8.87              | 8.91   | 11.75  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.66  | 25.62             | 25.43  | 33.45  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 19.43  | 30.43             | 37.07  | 50.52  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 25.92  | 37.60             | 37.30  | 49.05  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.07   | 1.55              | 1.54   | 2.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.43   | 9.33              | 9.26   | 12.17  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.73   | 3.96              | 3.93   | 5.17   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.86   | 7.04              | 6.99   | 9.19   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.43   | 4.97              | 4.93   | 6.49   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 118.62 | 182.35            | 212.33 | 287.29 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.34              | 0.34   | 0.44   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.26   | 0.38              | 0.37   | 0.49   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.10   | 5.95              | 5.90   | 7.76   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 40.34  | 58.52             | 58.06  | 76.34  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.32   | 1.91              | 1.90   | 2.49   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.81   | 2.66              | 2.74   | 3.62   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 19.03  | 27.61             | 27.41  | 36.04  |



**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.87  | 18.66             | 18.52  | 24.35  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 140.18 | 216.20            | 253.79 | 343.82 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 35.56  | 51.65             | 51.43  | 67.68  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.99   | 1.43              | 1.42   | 1.87   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.43   | 9.33              | 9.26   | 12.17  |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.67   | 3.88              | 3.85   | 5.06   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.95   | 4.62              | 5.61   | 7.64   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.75   | 5.79              | 6.82   | 9.25   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.01   | 6.18              | 7.23   | 9.79   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 31.39  | 45.52             | 45.17  | 59.39  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 231.48 | 335.76            | 333.12 | 438.05 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 231.03 | 335.11            | 332.47 | 437.19 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 227.46 | 329.93            | 327.33 | 430.44 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 15.63  | 22.68             | 22.50  | 29.58  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.49   | 6.51              | 6.45   | 8.49   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.71   | 10.13             | 11.28  | 15.15  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.93   | 5.69              | 5.65   | 7.43   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.49  | 18.27             | 18.62  | 24.61  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 12.49  | 18.27             | 18.62  | 24.61  |

**Table A-62. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.63  | 25.57             | 25.37  | 33.36  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 10.67  | 15.48             | 15.36  | 20.19  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.86   | 2.70              | 2.68   | 3.53   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 5.44   | 7.88              | 7.82   | 10.29  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 22.84  | 33.13             | 32.87  | 43.22  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 17.59  | 25.52             | 25.32  | 33.29  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 43.80  | 63.54             | 63.04  | 82.89  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 9.05   | 13.12             | 13.02  | 17.12  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 7.83   | 11.35             | 11.26  | 14.81  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 50.46  | 63.10             | 62.92  | 75.73  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 236.46 | 291.83            | 290.41 | 348.54 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 200.20 | 247.08            | 245.88 | 295.09 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 106.80 | 136.56            | 136.63 | 165.20 |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 34.89  | 43.05             | 42.84  | 51.42  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.87  | 16.01             | 15.96  | 19.18  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.47   | 1.87              | 1.87   | 2.26   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.59   | 11.95             | 11.90  | 14.32  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 88.56  | 110.08            | 109.67 | 131.82 |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 109.88 | 136.39            | 135.85 | 163.24 |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 109.88 | 136.39            | 135.85 | 163.24 |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 21.07  | 26.12             | 26.01  | 31.24  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 20.44  | 25.22             | 25.10  | 30.12  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.65  | 20.78             | 20.72  | 24.93  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.03   | 1.31              | 1.30   | 1.57   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.39  | 12.82             | 12.76  | 15.32  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 40.29  | 50.00             | 49.80  | 59.84  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 492.91 | 625.84            | 625.52 | 755.21 |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.32    | 33.56             | 34.92    | 44.40    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 31.44    | 38.80             | 38.61    | 46.34    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.08    | 12.45             | 12.39    | 14.86    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 95.87    | 118.34            | 117.76   | 141.33   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 97.50    | 120.35            | 119.77   | 143.74   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.67     | 4.54              | 4.51     | 5.42     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.58     | 0.71              | 0.71     | 0.85     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.36     | 2.91              | 2.90     | 3.48     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,063.21 | 1,315.05          | 1,309.07 | 1,571.85 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 970.53   | 1,200.68          | 1,195.25 | 1,435.25 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,064.04 | 1,316.08          | 1,310.10 | 1,573.08 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.43     | 10.41             | 10.36    | 12.43    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 99.00    | 132.94            | 133.97   | 163.53   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.97     | 2.49              | 2.48     | 3.00     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 474.36   | 587.75            | 585.24   | 702.98   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 467.31   | 579.01            | 576.54   | 692.53   |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |          |          |
|--|-------------------------------------|--|---|--|--------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 474.36 | 587.75            | 585.24   | 702.98   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 504.71 | 816.63            | 842.90   | 1,061.22 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 504.71 | 816.63            | 842.90   | 1,061.22 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 210.37 | 321.99            | 330.16   | 412.22   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.35   | 2.90              | 2.89     | 3.47     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.22   | 8.91              | 8.86     | 10.64    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.58  | 58.72             | 58.43    | 70.13    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.06   | 5.01              | 4.99     | 5.99     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 48.28  | 78.50             | 81.07    | 102.14   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 35.30  | 62.47             | 65.12    | 83.00    |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 199.86 | 247.14            | 246.01   | 295.37   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 200.13 | 247.47            | 246.34   | 295.77   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 200.13 | 247.47            | 246.34   | 295.77   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 50.46  | 63.10             | 62.92    | 75.73    |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.75   | 2.17              | 2.16     | 2.59     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 118.97 | 148.27            | 147.78   | 177.73   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 859.29 | 1,061.95          | 1,056.99 | 1,268.94 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 121.07 | 149.43            | 148.69   | 178.46   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.16   | 1.84              | 1.89     | 2.38     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12     | 0.14     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 160.32 | 197.95            | 196.99   | 236.45   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.16   | 1.44              | 1.43     | 1.71     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.52     | 11.76             | 11.70    | 14.04    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.70     | 7.03              | 7.00     | 8.40     |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 82.12    | 113.08            | 114.36   | 140.25   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 82.12    | 113.08            | 114.36   | 140.25   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 82.12    | 113.08            | 114.36   | 140.25   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 8.92     | 11.00             | 10.95    | 13.14    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 34.04    | 42.02             | 41.81    | 50.18    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.84     | 2.27              | 2.26     | 2.71     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 57.39    | 70.83             | 70.48    | 84.59    |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.39    | 70.83             | 70.48    | 84.59    |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.39    | 70.83             | 70.48    | 84.59    |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 198.35   | 244.80            | 243.60   | 292.37   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 410.67   | 506.83            | 504.36   | 605.32   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 398.23   | 491.49            | 489.08   | 586.99   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 95.01    | 117.79            | 117.29   | 140.91   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,326.22 | 1,791.89          | 1,807.36 | 2,208.85 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,326.22 | 1,791.89          | 1,807.36 | 2,208.85 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,346.18 | 1,816.53          | 1,831.87 | 2,238.27 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.76    | 37.96             | 37.77    | 45.33    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.23    | 17.56             | 17.48    | 20.98    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.76    | 37.96             | 37.77    | 45.33    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.47    | 37.60             | 37.42    | 44.91    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 370.92   | 459.52            | 457.55   | 549.59   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 374.92   | 464.49            | 462.50   | 555.53   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 358.65   | 444.42            | 442.52   | 531.56   |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 247.18   | 305.07            | 303.58   | 364.36   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.96    | 59.19             | 58.90    | 70.69    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 41.06    | 50.68             | 50.43    | 60.52    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 147.97   | 182.62            | 181.73   | 218.11   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 464.25   | 572.96            | 570.16   | 684.29   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 463.81   | 572.42            | 569.62   | 683.65   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 426.90   | 526.87            | 524.29   | 629.24   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 422.87   | 521.89            | 519.34   | 623.30   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.38     | 7.87              | 7.83     | 9.40     |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 87.10    | 108.96            | 108.65   | 130.78   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 328.78   | 405.77            | 403.78   | 484.61   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 328.78   | 405.77            | 403.78   | 484.61   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 296.77   | 366.26            | 364.47   | 437.43   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 13.10    | 17.20             | 17.28    | 21.00    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 14.49    | 18.92             | 18.99    | 23.06    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08     | 0.10              | 0.10     | 0.12     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 111.53   | 137.65            | 136.98   | 164.40   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 147.32   | 181.82            | 180.93   | 217.15   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,198.58 | 1,492.43          | 1,487.19 | 1,788.26 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,222.67 | 1,522.15          | 1,516.77 | 1,823.76 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 199.84   | 247.56            | 246.50   | 296.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 173.36 | 214.88            | 213.97 | 257.04   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 432.75 | 553.72            | 554.08 | 670.02   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 557.22 | 708.73            | 708.55 | 855.76   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 557.22 | 708.73            | 708.55 | 855.76   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 249.09 | 312.84            | 312.16 | 376.03   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 60.70  | 80.23             | 80.66  | 98.17    |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 805.83 | 1,000.09          | 996.07 | 1,196.88 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 789.42 | 979.83            | 975.91 | 1,172.69 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 789.42 | 979.83            | 975.91 | 1,172.69 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.68   | 2.08              | 2.07   | 2.48     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.28   | 6.52              | 6.48   | 7.78     |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.81   | 7.17              | 7.13   | 8.56     |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.90   | 2.34              | 2.33   | 2.80     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 18.56  | 22.91             | 22.80  | 27.36    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 96.01  | 168.58            | 175.58 | 223.55   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 24.26  | 40.70             | 42.18  | 53.37    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 76.46  | 99.90             | 100.28 | 121.77   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 12.83  | 21.03             | 21.74  | 27.43    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 38.61  | 47.66             | 47.42  | 56.92    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.51   | 0.63              | 0.63   | 0.75     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 36.09  | 44.54             | 44.32  | 53.19    |



**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 45.79  | 56.51             | 56.24  | 67.49  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 58.70  | 72.45             | 72.10  | 86.53  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 5.82   | 9.15              | 9.41   | 11.79  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 9.57   | 13.77             | 14.00  | 17.31  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.36   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 5.82   | 7.18              | 7.15   | 8.58   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.69   | 0.85              | 0.84   | 1.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 107.34 | 132.48            | 131.83 | 158.22 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 18.49  | 22.82             | 22.71  | 27.25  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 71.20  | 87.87             | 87.44  | 104.94 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 32.87  | 40.56             | 40.37  | 48.45  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 72.56  | 89.55             | 89.11  | 106.95 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.04   | 4.98              | 4.96   | 5.95   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 6.21   | 7.66              | 7.63   | 9.15   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 87.63  | 108.88            | 108.47 | 130.37 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 146.20 | 180.44            | 179.56 | 215.50 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 7.02   | 8.66              | 8.62   | 10.35  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.89   | 5.11              | 5.33   | 6.79   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 264.72 | 326.71            | 325.12 | 390.20 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 264.62 | 326.59            | 324.99 | 390.04 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 62.61  | 78.57             | 78.39  | 94.41  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.06     | 8.86              | 8.84     | 10.65    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 10.00    | 12.34             | 12.28    | 14.74    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 187.71   | 231.67            | 230.53   | 276.68   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 129.41   | 159.72            | 158.94   | 190.75   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.59     | 3.67              | 3.73     | 4.59     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.74     | 3.86              | 3.91     | 4.82     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 18.01    | 22.23             | 22.12    | 26.55    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 153.73   | 190.44            | 189.62   | 227.76   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 144.33   | 178.83            | 178.07   | 213.90   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 201.44   | 249.32            | 248.21   | 298.08   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 176.45   | 217.77            | 216.70   | 260.08   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43     | 0.53              | 0.52     | 0.63     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.36     | 0.45              | 0.45     | 0.54     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.36     | 0.45              | 0.45     | 0.54     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 36.63    | 45.20             | 44.98    | 53.99    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.49     | 3.12              | 3.12     | 3.75     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1,456.79 | 2,104.25          | 2,141.81 | 2,648.96 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,456.31 | 2,103.66          | 2,141.22 | 2,648.25 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.13     | 10.03             | 9.98     | 11.98    |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 32.71  | 40.77             | 40.64  | 48.88  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 59.37  | 73.68             | 73.39  | 88.18  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 5.88   | 7.25              | 7.22   | 8.66   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 32.87  | 40.56             | 40.36  | 48.44  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 40.12  | 49.51             | 49.27  | 59.13  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 40.12  | 49.51             | 49.27  | 59.13  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 39.92  | 49.27             | 49.03  | 58.84  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 24.05  | 40.43             | 41.91  | 53.05  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 14.59  | 18.00             | 17.92  | 21.50  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.28   | 0.34   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 395.27 | 487.83            | 485.45 | 582.62 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 305.01 | 376.44            | 374.60 | 449.58 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 74.34  | 91.75             | 91.30  | 109.58 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.24   | 1.53              | 1.52   | 1.83   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 16.22  | 20.02             | 19.92  | 23.91  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.48   | 10.50             | 10.45  | 12.55  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 29.79  | 36.77             | 36.59  | 43.92  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 30.63  | 37.80             | 37.62  | 45.15  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 30.63  | 37.80             | 37.62  | 45.15  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.18   | 10.09             | 10.04  | 12.05  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 23.55  | 29.07             | 28.93  | 34.72  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.53   | 11.76             | 11.70  | 14.04  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 0.90              | 0.89   | 1.07   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.85  | 22.03             | 21.93  | 26.32  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.40  | 23.94             | 23.82  | 28.59  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.40  | 23.94             | 23.82  | 28.59  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.02   | 8.66              | 8.62   | 10.35  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.35   | 1.67              | 1.66   | 1.99   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 110.96 | 137.22            | 136.59 | 164.00 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 297.16 | 369.23            | 367.82 | 442.08 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 22.50  | 27.76             | 27.63  | 33.16  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 32.66  | 51.05             | 52.48  | 65.74  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 32.66  | 51.05             | 52.48  | 65.74  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.71   | 4.57              | 4.55   | 5.46   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.58   | 4.42              | 4.40   | 5.28   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.33   | 1.65              | 1.64   | 1.97   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 11.68  | 14.42             | 14.34  | 17.22  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.61  | 14.33             | 14.26  | 17.12  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.60  | 15.55             | 15.48  | 18.57  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 195.82 | 241.68            | 240.50 | 288.64 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 118.97 | 146.83            | 146.11 | 175.36 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 155.57 | 192.00            | 191.06 | 229.30 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 155.57 | 192.00            | 191.06 | 229.30 |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 34.60  | 42.70             | 42.50  | 51.00  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.07  | 13.66             | 13.59  | 16.32  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.98   | 1.21              | 1.20   | 1.45   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 42.53  | 52.49             | 52.23  | 62.69  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 142.10 | 225.73            | 232.49 | 291.92 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.91   | 7.29              | 7.25   | 8.71   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 119.29 | 197.45            | 204.33 | 258.09 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.48   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.58   | 3.19              | 3.17   | 3.81   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.45   | 1.79              | 1.78   | 2.14   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 3.97   | 4.90              | 4.87   | 5.85   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 81.54  | 100.65            | 100.16 | 120.22 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 81.54  | 100.65            | 100.16 | 120.22 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 81.54  | 100.65            | 100.16 | 120.22 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 81.54  | 100.65            | 100.16 | 120.22 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 36.09  | 44.54             | 44.32  | 53.19  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 100.81 | 124.42            | 123.81 | 148.59 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 246.52   | 304.25            | 302.77   | 363.37   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 249.26   | 307.64            | 306.13   | 367.42   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.65     | 6.97              | 6.94     | 8.33     |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 35.47    | 62.68             | 65.33    | 83.25    |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 218.22   | 373.88            | 388.39   | 492.90   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.09     | 2.57              | 2.56     | 3.07     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.47     | 1.87              | 1.87     | 2.26     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.47     | 1.87              | 1.87     | 2.26     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 138.40   | 231.98            | 240.40   | 304.19   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.86     | 1.06              | 1.06     | 1.27     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.42    | 17.80             | 17.72    | 21.26    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.93    | 14.72             | 14.65    | 17.58    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.66     | 8.22              | 8.18     | 9.82     |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,672.38 | 3,466.92          | 3,476.33 | 4,215.40 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 456.81   | 731.36            | 753.96   | 947.78   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 456.81   | 731.36            | 753.96   | 947.78   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2,674.46 | 3,469.48          | 3,478.87 | 4,218.45 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2,674.24 | 3,469.22          | 3,478.61 | 4,218.14 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,673.82 | 3,468.69          | 3,478.09 | 4,217.52 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2,674.11 | 3,469.05          | 3,478.44 | 4,217.94 |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,672.38 | 3,466.92          | 3,476.33 | 4,215.40 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 197.39   | 243.66            | 242.48   | 291.03   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 190.42   | 235.06            | 233.92   | 280.76   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.29    | 20.11             | 20.01    | 24.01    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 301.30   | 506.33            | 524.86   | 664.34   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 37.33    | 46.07             | 45.85    | 55.02    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 37.33    | 46.07             | 45.85    | 55.02    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09     | 0.11              | 0.10     | 0.13     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 64.77    | 110.95            | 115.25   | 146.25   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.36    | 16.49             | 16.40    | 19.69    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 18.87    | 23.29             | 23.17    | 27.81    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 566.36   | 698.99            | 695.57   | 834.81   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 69.51    | 85.79             | 85.37    | 102.46   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 18.12    | 22.36             | 22.25    | 26.71    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.05     | 8.70              | 8.65     | 10.39    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.94     | 9.43              | 9.71     | 12.19    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 65.80    | 81.21             | 80.81    | 96.99    |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.58     | 6.89              | 6.86     | 8.23     |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.54    | 19.18             | 19.08    | 22.90    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 159.28 | 207.58            | 208.28 | 252.79 |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 181.04 | 234.56            | 235.15 | 285.07 |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 210.07 | 270.42            | 270.84 | 327.91 |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.63   | 2.01              | 2.00   | 2.40   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 259.41 | 320.17            | 318.60 | 382.38 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 186.56 | 230.26            | 229.13 | 275.00 |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 514.34 | 652.29            | 651.84 | 786.80 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 15.77  | 20.30             | 20.34  | 24.62  |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.07  | 19.41             | 19.44  | 23.54  |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 29.54  | 36.56             | 36.40  | 43.71  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.28  | 18.85             | 18.76  | 22.52  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.20   | 5.18              | 5.16   | 6.19   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 0.97              | 0.97   | 1.16   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.40   | 6.67              | 6.63   | 7.96   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |



**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.44     | 7.97              | 7.94     | 9.53     |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 26.48    | 32.68             | 32.52    | 39.03    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44     | 0.55              | 0.54     | 0.65     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.68     | 2.08              | 2.07     | 2.48     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.24     | 3.99              | 3.97     | 4.77     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 29.10    | 35.91             | 35.74    | 42.89    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.32     | 1.63              | 1.62     | 1.95     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.12    | 14.96             | 14.89    | 17.87    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 292.54   | 362.54            | 361.00   | 433.64   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.71     | 0.87              | 0.87     | 1.04     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 22.39    | 27.63             | 27.50    | 33.00    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.30    | 27.53             | 27.39    | 32.88    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.10     | 3.84              | 3.83     | 4.60     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 136.30   | 169.08            | 168.39   | 202.32   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.63     | 2.49              | 2.55     | 3.18     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 87.50    | 107.99            | 107.46   | 128.97   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2,522.78 | 3,138.49          | 3,127.04 | 3,759.39 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1,393.56 | 1,728.82          | 1,721.76 | 2,068.70 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2,532.62 | 3,150.73          | 3,139.23 | 3,774.04 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2,525.91 | 3,142.44          | 3,130.99 | 3,764.14 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2,522.78 | 3,138.49          | 3,127.04 | 3,759.39 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 8.77     | 10.92             | 10.88    | 13.08    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.33     | 9.05              | 9.01     | 10.81    |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 253.74   | 313.96            | 312.55   | 375.32   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.27     | 0.34              | 0.34     | 0.40     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.57     | 10.57             | 10.52    | 12.63    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 8.57     | 10.57             | 10.52    | 12.63    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.15     | 5.13              | 5.10     | 6.12     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.83    | 19.53             | 19.44    | 23.33    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.77    | 37.97             | 37.79    | 45.35    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 15.29    | 18.87             | 18.77    | 22.53    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 6.31     | 7.79              | 7.75     | 9.30     |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15     | 0.19              | 0.18     | 0.22     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.08    | 16.14             | 16.06    | 19.28    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 45.01    | 70.45             | 72.43    | 90.74    |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 163.30   | 211.32            | 211.82   | 256.73   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 785.85   | 1,035.96          | 1,041.22 | 1,266.57 |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 785.85   | 1,035.96          | 1,041.22 | 1,266.57 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,195.73 | 1,541.83          | 1,544.62 | 1,870.73 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,124.13 | 1,453.46          | 1,456.68 | 1,765.19 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 541.79   | 668.66            | 665.39   | 798.59   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 568.70   | 701.88            | 698.45   | 838.26   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 568.28   | 701.36            | 697.93   | 837.64   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29     | 0.35              | 0.35     | 0.42     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.12    | 12.49             | 12.43    | 14.91    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.69     | 5.79              | 5.76     | 6.92     |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 63.76    | 78.69             | 78.30    | 93.98    |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.92     | 4.84              | 4.81     | 5.77     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 29.14    | 36.21             | 36.07    | 43.35    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 307.00   | 380.10            | 378.43   | 454.49   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 307.00   | 380.10            | 378.43   | 454.49   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 279.43   | 346.07            | 344.57   | 413.85   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 279.43   | 346.07            | 344.57   | 413.85   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.81     | 5.93              | 5.90     | 7.08     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 181.85   | 225.00            | 223.99   | 268.97   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 117.11   | 146.32            | 145.88   | 175.54   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 152.06   | 187.67            | 186.75   | 224.13   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 14.48    | 17.87             | 17.78    | 21.34    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 152.14   | 189.74            | 189.12   | 227.48   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 11.11    | 13.76             | 13.70    | 16.46    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 61.78    | 76.30             | 75.94    | 91.15    |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.18     | 3.93              | 3.91     | 4.69     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 214.35   | 264.54            | 263.25   | 315.95   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 362.36   | 447.22            | 445.03   | 534.12   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.45     | 0.58              | 0.58     | 0.70     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 67.79    | 83.70             | 83.30    | 99.98    |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 67.79    | 83.70             | 83.30    | 99.98    |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 67.79    | 83.70             | 83.30    | 99.98    |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 50.22    | 61.98             | 61.68    | 74.03    |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.15     | 7.59              | 7.55     | 9.06     |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 218.00   | 269.05            | 267.73   | 321.33   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 68.39    | 84.41             | 83.99    | 100.81   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 68.39    | 84.41             | 83.99    | 100.81   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 79.89    | 98.59             | 98.11    | 117.75   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2,662.53 | 3,454.77          | 3,464.23 | 4,200.88 |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 199.36 | 246.41            | 245.26 | 294.44 |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 47.46  | 58.58             | 58.29  | 69.96  |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.80  | 19.50             | 19.41  | 23.29  |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.63   | 4.48              | 4.46   | 5.35   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.66   | 5.75              | 5.73   | 6.87   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 206.08 | 255.15            | 254.03 | 305.09 |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 192.17 | 237.42            | 236.30 | 283.67 |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 381.67 | 478.62            | 477.46 | 574.98 |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 381.76 | 478.73            | 477.57 | 575.10 |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 376.22 | 471.87            | 470.74 | 566.91 |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 39.03  | 48.17             | 47.93  | 57.53  |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 72.08  | 115.08            | 118.59 | 149.02 |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 348.28 | 484.82            | 491.04 | 603.40 |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 193.82 | 265.32            | 268.10 | 328.45 |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 193.82 | 265.32            | 268.10 | 328.45 |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 89.18  | 110.13            | 109.60 | 131.56 |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 519.45 | 641.31            | 638.21 | 766.02 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 520.50 | 642.62            | 639.51 | 767.58 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 519.97   | 641.96            | 638.86   | 766.80   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,044.44 | 1,304.13          | 1,300.12 | 1,564.24 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,039.39 | 1,297.90          | 1,293.91 | 1,556.79 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,044.44 | 1,304.13          | 1,300.12 | 1,564.24 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 956.93   | 1,196.13          | 1,192.65 | 1,435.25 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 704.58   | 881.49            | 879.04   | 1,058.05 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 704.58   | 881.49            | 879.04   | 1,058.05 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 704.58   | 881.49            | 879.04   | 1,058.05 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 704.44   | 881.32            | 878.87   | 1,057.84 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 704.44   | 881.32            | 878.87   | 1,057.84 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.16     | 1.74              | 1.79     | 2.22     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.08     | 1.33              | 1.33     | 1.59     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.52     | 1.88              | 1.87     | 2.25     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.33     | 9.05              | 9.01     | 10.81    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 142.48   | 176.09            | 175.27   | 210.42   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 39.43    | 48.66             | 48.43    | 58.12    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 426.07   | 525.84            | 523.27   | 628.01   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 68.46    | 84.49             | 84.07    | 100.90   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.52    | 24.09             | 23.97    | 28.77    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 19.52    | 24.09             | 23.97    | 28.77    |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 4.02   | 4.97              | 4.94   | 5.93   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 6.67   | 8.23              | 8.19   | 9.83   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 6.45   | 7.96              | 7.93   | 9.51   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 2.60   | 3.21              | 3.19   | 3.83   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 76.88  | 94.88             | 94.41  | 113.31 |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.81   | 2.23              | 2.22   | 2.66   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 44.49  | 54.91             | 54.64  | 65.58  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 45.85  | 56.59             | 56.31  | 67.58  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 164.29 | 202.77            | 201.78 | 242.17 |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 25.78  | 31.82             | 31.67  | 38.00  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 23.40  | 39.84             | 41.36  | 52.44  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 134.47 | 165.97            | 165.16 | 198.23 |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 514.89 | 672.17            | 674.61 | 819.05 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 511.39 | 667.85            | 670.32 | 813.90 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 511.39 | 667.85            | 670.32 | 813.90 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 33.14  | 40.90             | 40.70  | 48.85  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 10.18  | 12.56             | 12.50  | 15.00  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 19.69  | 24.78             | 24.74  | 29.81  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 19.69  | 24.78             | 24.74  | 29.81  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 19.69  | 24.78             | 24.74  | 29.81  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 56.06  | 69.28             | 68.96  | 82.78  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 57.87  | 100.90            | 105.01 | 133.58 |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 84.14  | 103.85            | 103.34 | 124.03 |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.46   | 4.27              | 4.24   | 5.09   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 20.88  | 25.77             | 25.64  | 30.78  |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.59   | 9.37              | 9.32   | 11.19  |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.45  | 19.07             | 18.98  | 22.78  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.13  | 13.73             | 13.67  | 16.40  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 363.03 | 582.62            | 600.79 | 755.51 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.78   | 0.96              | 0.95   | 1.14   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.84   | 1.04              | 1.03   | 1.24   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 13.55  | 16.73             | 16.65  | 19.98  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 131.16 | 161.87            | 161.08 | 193.32 |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.99   | 6.16              | 6.13   | 7.35   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.82   | 7.59              | 7.62   | 9.25   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 61.78  | 76.30             | 75.94  | 91.15  |



**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 41.72  | 51.49             | 51.24  | 61.49    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 427.35 | 695.70            | 718.59 | 905.51   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 115.32 | 143.13            | 142.56 | 171.31   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.38   | 5.41              | 5.39   | 6.46     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.88  | 25.77             | 25.64  | 30.78    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.63   | 0.78              | 0.78   | 0.93     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.61   | 10.63             | 10.58  | 12.70    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.81   | 15.25             | 15.86  | 20.15    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.34  | 18.62             | 19.25  | 24.29    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 12.12  | 19.66             | 20.30  | 25.56    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 101.89 | 125.75            | 125.13 | 150.18   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 751.50 | 927.51            | 922.97 | 1,107.74 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 750.08 | 925.74            | 921.22 | 1,105.63 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 738.46 | 911.41            | 906.96 | 1,088.51 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 49.77  | 61.43             | 61.13  | 73.36    |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.89  | 18.38             | 18.29  | 21.95    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 22.71  | 33.31             | 33.97  | 42.12    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.25  | 16.35             | 16.27  | 19.52    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 40.20  | 51.70             | 51.78  | 62.68    |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 40.20  | 51.70             | 51.78  | 62.68    |

**Table A-63. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 57.16  | 70.54             | 70.20  | 84.25  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 35.81  | 44.20             | 43.98  | 52.79  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.40   | 7.90              | 7.86   | 9.44   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 17.72  | 21.87             | 21.76  | 26.12  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 74.15  | 91.51             | 91.06  | 109.29 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 57.11  | 70.49             | 70.14  | 84.18  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 142.20 | 175.50            | 174.64 | 209.60 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 29.46  | 36.36             | 36.19  | 43.43  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 25.23  | 31.14             | 30.99  | 37.20  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 73.44  | 89.58             | 89.33  | 105.78   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 343.22 | 412.56            | 411.20 | 485.46   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 290.55 | 349.25            | 348.09 | 410.96   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 154.53 | 193.29            | 192.89 | 229.57   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 50.63  | 60.86             | 60.66  | 71.61    |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 20.75  | 25.17             | 25.10  | 29.69    |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.47   | 1.86              | 1.86   | 2.22     |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.71   | 11.83             | 11.79  | 13.96    |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 128.44 | 155.64            | 155.17 | 183.49   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 159.38 | 192.83            | 192.23 | 227.26   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 159.38 | 192.83            | 192.23 | 227.26   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 30.57  | 36.92             | 36.81  | 43.50    |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 29.66  | 35.65             | 35.53  | 41.95    |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 23.57  | 28.70             | 28.62  | 33.87    |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.44   | 1.79              | 1.78   | 2.12     |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.08  | 18.13             | 18.07  | 21.33    |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 58.45  | 70.69             | 70.47  | 83.31    |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 713.61 | 885.60            | 883.56 | 1,049.90 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |          |                   |          |          |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 26.90    | 47.78             | 48.11    | 60.56    |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 45.62    | 54.84             | 54.66    | 64.53    |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.64    | 17.59             | 17.53    | 20.70    |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 139.24   | 167.38            | 166.83   | 196.96   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 141.50   | 170.11            | 169.55   | 200.18   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.33     | 6.41              | 6.39     | 7.54     |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.59     | 0.71              | 0.71     | 0.83     |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.89     | 4.67              | 4.66     | 5.50     |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,542.73 | 1,858.96          | 1,852.95 | 2,188.70 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,408.23 | 1,697.29          | 1,691.81 | 1,998.46 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,543.92 | 1,860.39          | 1,854.37 | 2,190.38 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.16    | 14.62             | 14.57    | 17.20    |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 143.05   | 189.03            | 188.95   | 227.23   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.05     | 3.76              | 3.75     | 4.46     |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 688.27   | 830.99            | 828.36   | 978.85   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 678.35   | 819.00            | 816.40   | 964.72   |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 688.27   | 830.99            | 828.36   | 978.85   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 713.33   | 1,165.24          | 1,171.24 | 1,457.67 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 713.33   | 1,165.24          | 1,171.24 | 1,457.67 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 299.14   | 458.65            | 460.31   | 567.56   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.63     | 4.37              | 4.35     | 5.14     |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 10.47    | 12.59             | 12.55    | 14.81    |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 69.05    | 83.00             | 82.72    | 97.67    |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.90     | 7.09              | 7.06     | 8.34     |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 67.81    | 111.56            | 112.15   | 139.72   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 49.36    | 89.37             | 90.04    | 113.61   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 290.01   | 349.35            | 348.22   | 411.29   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 290.15   | 349.52            | 348.39   | 411.49   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 290.15   | 349.52            | 348.39   | 411.49   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 73.44    | 89.58             | 89.33    | 105.78   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.81     | 3.37              | 3.36     | 3.97     |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 174.56   | 212.12            | 211.50   | 250.25   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,248.02 | 1,502.44          | 1,497.54 | 1,768.55 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 175.90   | 211.43            | 210.73   | 248.79   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.43     | 2.37              | 2.38     | 2.97     |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09     | 0.11              | 0.11     | 0.12     |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 232.58   | 279.69            | 278.77   | 329.15   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.27     | 1.53              | 1.53     | 1.80     |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|-------------------------------------|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.82    | 16.62             | 16.56    | 19.55    |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.47     | 10.18             | 10.15    | 11.98    |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 118.01   | 160.50            | 160.56   | 194.10   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 118.01   | 160.50            | 160.56   | 194.10   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 118.01   | 160.50            | 160.56   | 194.10   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 12.94    | 15.55             | 15.50    | 18.30    |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 49.40    | 59.38             | 59.19    | 69.87    |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61     | 0.74              | 0.74     | 0.87     |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 83.29    | 100.11            | 99.78    | 117.80   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 83.29    | 100.11            | 99.78    | 117.80   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 83.29    | 100.11            | 99.78    | 117.80   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 287.89   | 346.05            | 344.91   | 407.20   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 597.56   | 718.28            | 715.90   | 845.19   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 580.19   | 697.40            | 695.09   | 820.63   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 137.83   | 166.52            | 166.00   | 196.18   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1,910.43 | 2,542.81          | 2,542.29 | 3,061.39 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,910.43 | 2,542.81          | 2,542.29 | 3,061.39 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,939.57 | 2,577.83          | 2,577.19 | 3,102.60 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.64    | 53.65             | 53.48    | 63.13    |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 22.49    | 27.03             | 26.94    | 31.81    |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.64    | 53.65             | 53.48    | 63.13    |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 44.43    | 53.41             | 53.23    | 62.85    |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 538.33   | 649.86            | 647.80   | 765.46   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 543.91   | 656.61            | 654.53   | 773.42   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 520.30   | 628.24            | 626.25   | 740.03   |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 359.50   | 432.14            | 430.71   | 508.50   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 69.60    | 83.66             | 83.38    | 98.44    |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 59.59    | 71.63             | 71.39    | 84.29    |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 215.21   | 258.69            | 257.83   | 304.39   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 674.18   | 810.37            | 807.69   | 953.56   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 673.54   | 809.61            | 806.93   | 952.66   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 619.40   | 744.53            | 742.06   | 876.08   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 614.08   | 738.13            | 735.69   | 868.55   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 9.14     | 10.99             | 10.95    | 12.93    |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 126.71   | 154.64            | 154.21   | 182.62   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 477.15   | 573.54            | 571.64   | 674.88   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 477.15   | 573.54            | 571.64   | 674.88   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 430.58   | 517.56            | 515.85   | 609.01   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.93    | 24.40             | 24.37    | 29.17    |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 18.71    | 24.14             | 24.11    | 28.87    |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 156.44   | 188.05            | 187.42   | 221.27   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 214.11   | 257.36            | 256.51   | 302.83   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1,738.18 | 2,110.26          | 2,103.94 | 2,489.00 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1,773.13 | 2,152.27          | 2,145.81 | 2,538.43 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 289.93   | 349.98            | 348.86   | 412.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 251.50   | 303.78            | 302.82   | 357.86   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 626.46   | 784.22            | 782.62   | 931.55   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 806.97   | 1,003.40          | 1,001.14 | 1,190.08 |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 806.97   | 1,003.40          | 1,001.14 | 1,190.08 |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 309.84   | 380.99            | 380.00   | 450.71   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 105.40   | 135.15            | 134.97   | 161.41   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1,169.05 | 1,414.05          | 1,409.65 | 1,666.38 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1,145.23 | 1,385.42          | 1,381.11 | 1,632.69 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1,145.23 | 1,385.42          | 1,381.11 | 1,632.69 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.49     | 2.99              | 2.98     | 3.52     |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.34     | 10.03             | 9.99     | 11.80    |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.31     | 11.19             | 11.16    | 13.17    |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.79     | 3.35              | 3.34     | 3.94     |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 29.89    | 35.92             | 35.80    | 42.27    |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 134.69   | 241.49            | 243.24   | 306.54   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03     | 0.03              | 0.03     | 0.04     |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 33.00    | 56.75             | 57.10    | 71.57    |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 107.75   | 138.30            | 138.12   | 165.20   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.52    | 29.32             | 29.49    | 36.82    |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 56.04    | 67.36             | 67.14    | 79.26    |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.90     | 1.08              | 1.08     | 1.27     |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 54.04    | 64.96             | 64.75    | 76.44    |



**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 66.45  | 79.88             | 79.61  | 93.99  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 86.77  | 104.31            | 103.97 | 122.75 |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 7.82   | 12.51             | 12.57  | 15.60  |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 13.49  | 19.32             | 19.36  | 23.61  |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.31   | 0.38              | 0.37   | 0.44   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 8.56   | 10.29             | 10.26  | 12.11  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.93   | 1.12              | 1.12   | 1.32   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 155.79 | 187.26            | 186.64 | 220.35 |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 26.55  | 31.91             | 31.80  | 37.55  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 103.33 | 124.20            | 123.79 | 146.14 |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 47.70  | 57.34             | 57.15  | 67.47  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 105.30 | 126.57            | 126.15 | 148.94 |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 6.58   | 7.91              | 7.88   | 9.30   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 9.01   | 10.83             | 10.80  | 12.75  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 125.65 | 152.19            | 151.73 | 179.41 |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 212.32 | 255.21            | 254.37 | 300.30 |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 10.85  | 13.04             | 12.99  | 15.34  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.04   | 7.32              | 7.37   | 9.30   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 383.37 | 460.82            | 459.29 | 542.24 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 383.44 | 460.91            | 459.38 | 542.34 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 90.73  | 111.13            | 110.82 | 131.34 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 10.23    | 12.54             | 12.50    | 14.82    |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 14.51    | 17.45             | 17.39    | 20.53    |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 272.45   | 327.49            | 326.41   | 385.35   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 187.82   | 225.76            | 225.01   | 265.65   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.45     | 4.91              | 4.92     | 5.99     |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.95     | 5.51              | 5.52     | 6.70     |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 26.19    | 31.48             | 31.38    | 37.05    |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 223.04   | 269.22            | 268.37   | 317.11   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 209.39   | 252.82            | 252.02   | 297.80   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 292.28   | 352.45            | 351.32   | 415.04   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 256.58   | 308.42            | 307.40   | 362.91   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.55     | 0.66              | 0.65     | 0.77     |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.52     | 0.62              | 0.62     | 0.73     |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.52     | 0.62              | 0.62     | 0.73     |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 53.16    | 63.89             | 63.68    | 75.18    |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.76     | 4.60              | 4.58     | 5.43     |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2,083.94 | 2,991.61          | 2,997.30 | 3,657.05 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2,083.37 | 2,990.93          | 2,996.63 | 3,656.24 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.80    | 14.18             | 14.13    | 16.69    |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 47.43  | 57.66             | 57.49  | 68.03  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 85.92  | 103.92            | 103.60 | 122.47 |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 48.09  | 57.81             | 57.62  | 68.02  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 58.22  | 69.99             | 69.75  | 82.35  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 58.22  | 69.99             | 69.75  | 82.35  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 58.15  | 69.90             | 69.67  | 82.25  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 32.53  | 56.18             | 56.54  | 70.91  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 21.20  | 25.49             | 25.40  | 29.99  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 573.65 | 689.54            | 687.26 | 811.38 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 442.66 | 532.08            | 530.32 | 626.10 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 104.58 | 125.71            | 125.29 | 147.92 |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.23   | 2.68              | 2.67   | 3.15   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 23.54  | 28.30             | 28.21  | 33.30  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 12.46  | 15.03             | 14.98  | 17.70  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 44.53  | 53.53             | 53.35  | 62.99  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 44.31  | 53.26             | 53.08  | 62.67  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 44.31  | 53.26             | 53.08  | 62.67  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.92  | 14.33             | 14.28  | 16.86  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 34.18  | 41.09             | 40.95  | 48.35  |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.64  | 17.59             | 17.54  | 20.70  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.94   | 1.13              | 1.13   | 1.33   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 25.91  | 31.14             | 31.04  | 36.65  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 27.89  | 33.53             | 33.42  | 39.45  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.89  | 33.53             | 33.42  | 39.45  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 10.85  | 13.04             | 12.99  | 15.34  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.98   | 2.38              | 2.37   | 2.80   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 161.00 | 193.97            | 193.34 | 228.37 |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 431.01 | 522.03            | 520.43 | 615.38 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 32.65  | 39.24             | 39.11  | 46.18  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 43.51  | 69.38             | 69.69  | 86.44  |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.51  | 69.38             | 69.69  | 86.44  |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.38   | 6.47              | 6.44   | 7.61   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.67   | 6.81              | 6.79   | 8.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.79   | 2.15              | 2.14   | 2.53   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 20.62  | 24.78             | 24.70  | 29.16  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 20.62  | 24.79             | 24.71  | 29.17  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.76  | 26.15             | 26.07  | 30.77  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 284.19 | 341.61            | 340.48 | 401.97 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 172.78 | 207.69            | 207.00 | 244.39 |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 225.70 | 271.30            | 270.40 | 319.24 |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 225.70 | 271.30            | 270.40 | 319.24 |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 50.23  | 60.38             | 60.18  | 71.05  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.58  | 18.73             | 18.67  | 22.04  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.35   | 5.22              | 5.21   | 6.15   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 61.72  | 74.19             | 73.94  | 87.30  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 197.74 | 317.67            | 319.18 | 396.28 |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.12   | 9.76              | 9.73   | 11.48  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 163.71 | 276.54            | 278.18 | 347.83 |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.14   | 3.77              | 3.76   | 4.44   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.11   | 2.49   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.13   | 4.96              | 4.95   | 5.84   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 118.34 | 142.27            | 141.80 | 167.41 |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 118.34 | 142.27            | 141.80 | 167.41 |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 118.34 | 142.27            | 141.80 | 167.41 |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 118.34 | 142.27            | 141.80 | 167.41 |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 54.04  | 64.96             | 64.75  | 76.44  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 146.31 | 175.86            | 175.28 | 206.93 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 358.48   | 430.91            | 429.48   | 507.05   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 362.05   | 435.21            | 433.77   | 512.11   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 8.39     | 10.08             | 10.05    | 11.86    |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 49.62    | 89.69             | 90.36    | 113.99   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 307.15   | 535.32            | 538.88   | 676.62   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.43     | 4.12              | 4.11     | 4.85     |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.47     | 1.86              | 1.86     | 2.22     |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.47     | 1.86              | 1.86     | 2.22     |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 194.81   | 331.36            | 333.38   | 417.23   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.01     | 1.21              | 1.21     | 1.43     |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.00    | 25.24             | 25.16    | 29.70    |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 17.74    | 21.33             | 21.26    | 25.09    |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.81     | 10.59             | 10.56    | 12.46    |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,870.58 | 4,920.61          | 4,912.91 | 5,865.41 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 641.46   | 1,037.30          | 1,042.40 | 1,295.44 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 641.46   | 1,037.30          | 1,042.40 | 1,295.44 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3,873.90 | 4,924.60          | 4,916.89 | 5,870.11 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3,873.64 | 4,924.30          | 4,916.58 | 5,869.75 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,872.88 | 4,923.38          | 4,915.66 | 5,868.67 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3,873.38 | 4,923.98          | 4,916.27 | 5,869.38 |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,870.58 | 4,920.61          | 4,912.91 | 5,865.41 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 286.46   | 344.41            | 343.28   | 405.29   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 276.49   | 332.42            | 331.33   | 391.18   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 24.27    | 29.18             | 29.08    | 34.33    |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 421.29   | 720.04            | 724.50   | 907.34   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 54.18    | 65.12             | 64.90    | 76.63    |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 54.18    | 65.12             | 64.90    | 76.63    |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 90.29    | 157.75            | 158.80   | 199.46   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.60    | 22.36             | 22.29    | 26.31    |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 27.44    | 32.98             | 32.87    | 38.81    |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 821.58   | 987.56            | 984.29   | 1,162.05 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 99.43    | 119.52            | 119.12   | 140.64   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 26.29    | 31.61             | 31.50    | 37.19    |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.23    | 12.29             | 12.25    | 14.46    |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.58     | 13.64             | 13.70    | 16.99    |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 95.49    | 114.79            | 114.41   | 135.07   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.10     | 9.74              | 9.71     | 11.46    |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 23.67    | 28.45             | 28.35    | 33.47    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 230.07 | 294.03            | 293.62 | 350.90   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 261.64 | 332.17            | 331.63 | 395.83   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 304.09 | 383.24            | 382.54 | 455.94   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.31   | 1.57              | 1.56   | 1.85     |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.31   | 1.57              | 1.56   | 1.85     |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.31   | 1.57              | 1.56   | 1.85     |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 376.62 | 452.72            | 451.22 | 532.72   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 270.89 | 325.63            | 324.55 | 383.17   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 745.44 | 923.87            | 921.70 | 1,094.92 |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 22.87  | 28.83             | 28.78  | 34.30    |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 21.79  | 27.48             | 27.43  | 32.69    |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 39.99  | 48.24             | 48.09  | 56.81    |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.30  | 28.01             | 27.92  | 32.96    |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.26   | 7.53              | 7.50   | 8.86     |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.27   | 1.53              | 1.52   | 1.80     |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.35   | 8.84              | 8.81   | 10.40    |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.06   | 0.08              | 0.08   | 0.09     |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.09     |



**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 9.87     | 11.90             | 11.86    | 14.01    |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 38.42    | 46.19             | 46.03    | 54.35    |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.38     | 0.46              | 0.46     | 0.54     |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.48     | 2.99              | 2.98     | 3.51     |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.86     | 5.84              | 5.82     | 6.88     |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 42.12    | 50.63             | 50.46    | 59.58    |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.20     | 2.64              | 2.63     | 3.11     |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.08    | 21.73             | 21.66    | 25.57    |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 424.45   | 512.56            | 510.94   | 603.79   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.78     | 0.94              | 0.94     | 1.10     |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 30.83    | 37.06             | 36.94    | 43.61    |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.78    | 36.99             | 36.87    | 43.53    |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.17     | 5.04              | 5.03     | 5.94     |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 197.64   | 238.94            | 238.19   | 281.54   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.29     | 3.51              | 3.52     | 4.35     |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 126.98   | 152.63            | 152.13   | 179.60   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3,660.18 | 4,439.26          | 4,425.83 | 5,234.77 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2,024.98 | 2,448.26          | 2,440.61 | 2,884.83 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3,674.64 | 4,456.77          | 4,443.29 | 5,255.42 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3,666.80 | 4,447.35          | 4,433.89 | 5,244.33 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3,660.18 | 4,439.26          | 4,425.83 | 5,234.77 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 13.06    | 15.83             | 15.79    | 18.67    |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.00    | 13.23             | 13.18    | 15.56    |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 368.83   | 444.61            | 443.18   | 523.52   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.24     | 0.29              | 0.29     | 0.35     |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.26    | 14.74             | 14.69    | 17.34    |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.26    | 14.74             | 14.69    | 17.34    |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.60     | 6.73              | 6.70     | 7.91     |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.82    | 27.43             | 27.34    | 32.28    |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 44.65    | 53.67             | 53.49    | 63.16    |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 22.18    | 26.67             | 26.58    | 31.38    |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.31     | 11.19             | 11.15    | 13.16    |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19     | 0.22              | 0.22     | 0.26     |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 18.41    | 22.12             | 22.05    | 26.03    |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 66.94    | 104.14            | 104.55   | 129.19   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 236.02   | 299.26            | 298.76   | 356.50   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,133.96 | 1,468.05          | 1,466.55 | 1,756.96 |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,133.96 | 1,468.05          | 1,466.55 | 1,756.96 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,729.73 | 2,184.18          | 2,180.31 | 2,599.63 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,626.90 | 2,060.58          | 2,057.12 | 2,454.19 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 784.90   | 943.46            | 940.34   | 1,110.16 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 824.83   | 991.47            | 988.18   | 1,166.65 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 824.22   | 990.73            | 987.45   | 1,165.79 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33     | 0.40              | 0.40     | 0.47     |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 15.57    | 18.72             | 18.66    | 22.03    |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.94     | 9.54              | 9.51     | 11.23    |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 94.38    | 113.45            | 113.07   | 133.49   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.69     | 6.83              | 6.81     | 8.04     |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 38.19    | 46.26             | 46.12    | 54.53    |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 445.42   | 537.33            | 535.61   | 632.81   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 445.42   | 537.33            | 535.61   | 632.81   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 405.76   | 489.65            | 488.09   | 576.71   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 405.76   | 489.65            | 488.09   | 576.71   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.97     | 8.38              | 8.36     | 9.86     |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 264.96   | 319.38            | 318.35   | 376.07   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 169.59   | 206.68            | 206.09   | 243.99   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|--|-----------------------------|--|---|--|----------|-------------------|----------|----------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 220.68   | 265.27            | 264.39   | 312.13   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 21.69    | 26.07             | 25.99    | 30.68    |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 220.77   | 268.51            | 267.72   | 316.83   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 15.66    | 18.91             | 18.85    | 22.27    |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 89.66    | 107.85            | 107.50   | 126.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 311.08   | 373.92            | 372.69   | 439.99   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 526.35   | 632.69            | 630.59   | 744.48   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.64     | 0.79              | 0.79     | 0.94     |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 98.39    | 118.32            | 117.93   | 139.24   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 98.39    | 118.32            | 117.93   | 139.24   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 98.39    | 118.32            | 117.93   | 139.24   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 71.37    | 85.78             | 85.50    | 100.94   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 11.07    | 13.31             | 13.26    | 15.66    |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 316.38   | 380.29            | 379.03   | 447.49   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 96.39    | 115.86            | 115.48   | 136.33   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 96.39    | 115.86            | 115.48   | 136.33   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 112.59   | 135.34            | 134.89   | 159.25   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3,856.89 | 4,904.17          | 4,896.52 | 5,846.06 |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |          |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 289.35 | 348.38            | 347.24 | 410.09   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 68.88  | 82.80             | 82.53  | 97.43    |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 22.93  | 27.57             | 27.48  | 32.44    |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.22   | 8.68              | 8.65   | 10.21    |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.77   | 8.13              | 8.11   | 9.57     |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 290.15 | 350.08            | 348.96 | 412.30   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 278.86 | 335.60            | 334.50 | 395.01   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 554.40 | 678.43            | 676.56 | 801.68   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 554.45 | 678.49            | 676.63 | 801.75   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 547.85 | 670.52            | 668.69 | 792.37   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 57.87  | 69.56             | 69.33  | 81.85    |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 100.09 | 161.80            | 162.59 | 202.05   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 500.66 | 689.16            | 689.68 | 835.49   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 278.70 | 376.50            | 376.58 | 454.69   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 278.70 | 376.50            | 376.58 | 454.69   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 119.36 | 143.57            | 143.10 | 168.96   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 754.24 | 906.97            | 903.98 | 1,067.32 |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 755.32 | 908.27            | 905.28 | 1,068.86 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 755.05   | 907.94            | 904.95   | 1,068.47 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,516.47 | 1,846.85          | 1,841.50 | 2,179.91 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1,508.75 | 1,837.57          | 1,832.25 | 2,169.00 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,516.47 | 1,846.85          | 1,841.50 | 2,179.91 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1,388.56 | 1,693.10          | 1,688.26 | 1,999.00 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1,025.50 | 1,251.60          | 1,248.06 | 1,478.06 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,025.50 | 1,251.60          | 1,248.06 | 1,478.06 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1,025.50 | 1,251.60          | 1,248.06 | 1,478.06 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,025.36 | 1,251.43          | 1,247.89 | 1,477.86 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1,025.36 | 1,251.43          | 1,247.89 | 1,477.86 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.42     | 2.21              | 2.22     | 2.74     |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.35     | 1.62              | 1.62     | 1.91     |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.21     | 2.66              | 2.65     | 3.13     |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 11.00    | 13.23             | 13.18    | 15.56    |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 206.75   | 248.92            | 248.11   | 293.01   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 57.36    | 68.95             | 68.72    | 81.13    |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 617.75   | 742.55            | 740.09   | 873.74   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 98.10    | 117.92            | 117.53   | 138.75   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 28.33    | 34.05             | 33.94    | 40.07    |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 28.33    | 34.05             | 33.94    | 40.07    |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-----------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
|   |                             | Moderate                                     |   |  |        |                   |        |          |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 5.95   | 7.15              | 7.13   | 8.41     |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 9.68   | 11.64             | 11.60  | 13.70    |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 9.57   | 11.51             | 11.47  | 13.54    |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.51   | 4.22              | 4.21   | 4.97     |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 111.57 | 134.11            | 133.66 | 157.80   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.80   | 3.37              | 3.36   | 3.96     |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 63.57  | 76.41             | 76.16  | 89.91    |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 65.57  | 78.82             | 78.55  | 92.74    |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 238.44 | 286.61            | 285.66 | 337.25   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 38.87  | 46.73             | 46.57  | 54.98    |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 32.87  | 56.93             | 57.30  | 71.88    |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 191.03 | 229.64            | 228.88 | 270.23   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 743.62 | 952.16            | 950.88 | 1,136.80 |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 738.55 | 946.07            | 944.81 | 1,129.63 |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 738.55 | 946.07            | 944.81 | 1,129.63 |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 48.09  | 57.81             | 57.62  | 68.02    |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 15.57  | 18.71             | 18.65  | 22.02    |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 28.53  | 35.06             | 34.96  | 41.46    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 28.53  | 35.06             | 34.96  | 41.46    |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 28.53  | 35.06             | 34.96  | 41.46    |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |          |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5   |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 79.06  | 95.17             | 94.86  | 112.03   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 80.38  | 143.44            | 144.47 | 181.96   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 122.12 | 146.79            | 146.30 | 172.72   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.97   | 5.98              | 5.96   | 7.03     |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.30  | 36.42             | 36.30  | 42.86    |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.51   | 9.03              | 9.00   | 10.62    |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 21.94  | 26.38             | 26.29  | 31.04    |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 16.15  | 19.41             | 19.35  | 22.84    |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 513.69 | 831.28            | 835.38 | 1,038.29 |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.15   | 1.39              | 1.38   | 1.63     |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.21   | 1.46              | 1.45   | 1.71     |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 20.15  | 24.22             | 24.14  | 28.49    |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 190.65 | 229.17            | 228.41 | 269.66   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00     |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.16   | 11.01             | 10.97  | 12.96    |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.41   | 10.75             | 10.74  | 12.83    |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 89.66  | 107.85            | 107.50 | 126.93   |



**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |          |                   |          |          |
|---|-------------------------------------|--|---|--|----------|-------------------|----------|----------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2   | Alt.3 – Preferred | Alt. 4   | Alt. 5   |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 60.47    | 72.68             | 72.44    | 85.52    |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 603.41   | 992.68            | 997.96   | 1,243.25 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 167.28   | 202.36            | 201.73   | 238.48   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00     | 0.00              | 0.00     | 0.00     |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 30.30    | 36.42             | 36.30    | 42.86    |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.88     | 1.05              | 1.05     | 1.24     |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.38    | 14.88             | 14.83    | 17.51    |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.16    | 21.55             | 21.70    | 27.31    |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 15.81    | 26.33             | 26.48    | 33.04    |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 16.75    | 27.55             | 27.70    | 34.51    |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 147.87   | 177.74            | 177.15   | 209.14   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1,090.75 | 1,311.14          | 1,306.79 | 1,542.81 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1,088.73 | 1,308.71          | 1,304.37 | 1,539.95 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1,071.83 | 1,288.40          | 1,284.14 | 1,516.06 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 70.61    | 84.87             | 84.59    | 99.87    |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 22.48    | 27.03             | 26.94    | 31.80    |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 38.23    | 54.34             | 54.43    | 66.30    |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.87    | 23.89             | 23.81    | 28.11    |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 58.13    | 73.20             | 73.06    | 87.07    |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 58.13    | 73.20             | 73.06    | 87.07    |

**Table A-64. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Carbon Monoxide (CO) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 82.83  | 99.56             | 99.23  | 117.15 |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 54.39  | 65.37             | 65.16  | 76.92  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 9.89   | 11.89             | 11.85  | 13.99  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 25.85  | 31.07             | 30.97  | 36.56  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 107.61 | 129.35            | 128.92 | 152.20 |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 82.89  | 99.63             | 99.30  | 117.24 |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 206.37 | 248.06            | 247.24 | 291.89 |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 42.92  | 51.59             | 51.42  | 60.70  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 36.35  | 43.70             | 43.55  | 51.42  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-65. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acetaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.92   | 2.75              | 2.75   | 3.57   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.63   | 2.33              | 2.33   | 3.03   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.48   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.28   | 0.41              | 0.41   | 0.53   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.71   | 1.01              | 1.01   | 1.32   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.88   | 1.26              | 1.26   | 1.64   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.88   | 1.26              | 1.26   | 1.64   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.46   | 0.60   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.78   | 5.41              | 5.43   | 7.08   |

Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.45   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.13              | 1.13   | 1.47   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.61   | 12.30             | 12.30  | 15.99  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.86   | 11.23             | 11.22  | 14.59  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 8.62   | 12.31             | 12.31  | 16.01  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.64   | 0.92              | 0.92   | 1.19   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.83   | 5.47              | 5.46   | 7.11   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.77   | 5.38              | 5.38   | 7.00   |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.83   | 5.47              | 5.46   | 7.11   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.17   | 1.67              | 1.66   | 2.16   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.17   | 1.67              | 1.66   | 2.16   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.82   | 1.20              | 1.24   | 1.65   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 2.31              | 2.31   | 3.01   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.97   | 9.96              | 9.95   | 12.94  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.98   | 1.41              | 1.41   | 1.83   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.30   | 1.86              | 1.86   | 2.42   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.72   | 0.93   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.51   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.61   | 2.31              | 2.31   | 3.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.33   | 4.76              | 4.76   | 6.19   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.23   | 4.61              | 4.61   | 6.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.77   | 1.09              | 1.09   | 1.42   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 8.43   | 12.05             | 12.05  | 15.67  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 8.43   | 12.05             | 12.05  | 15.67  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.60   | 12.28             | 12.28  | 15.97  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.99   | 4.27              | 4.27   | 5.56   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.03   | 4.32              | 4.32   | 5.62   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.89   | 4.13              | 4.13   | 5.37   |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.01   | 2.87              | 2.87   | 3.73   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.56              | 0.56   | 0.73   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.33   | 0.48              | 0.48   | 0.62   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.20   | 1.72              | 1.72   | 2.23   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.78   | 5.40              | 5.40   | 7.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.77   | 5.39              | 5.39   | 7.01   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.48   | 4.97              | 4.96   | 6.46   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.44   | 4.92              | 4.91   | 6.39   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.27   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.68   | 3.82              | 3.82   | 4.97   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.68   | 3.82              | 3.82   | 4.97   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.42   | 3.45              | 3.45   | 4.49   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.92   | 1.32              | 1.32   | 1.72   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.23   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 9.56   | 13.66             | 13.65  | 17.75  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 9.75   | 13.94             | 13.93  | 18.11  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 2.30              | 2.30   | 3.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.40   | 2.00              | 2.00   | 2.59   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.22   | 4.60              | 4.60   | 5.99   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.21   | 6.02              | 6.02   | 7.83   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.21   | 6.02              | 6.02   | 7.83   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.09   | 2.98              | 2.98   | 3.88   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.48   | 9.25              | 9.25   | 12.03  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.34   | 9.06              | 9.06   | 11.78  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 6.34   | 9.06              | 9.06   | 11.78  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |



**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.47   | 0.68              | 0.68   | 0.88   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.87   | 1.25              | 1.25   | 1.62   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.58   | 0.83              | 0.83   | 1.08   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.27   | 0.38              | 0.38   | 0.50   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.59   | 0.84              | 0.84   | 1.10   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.71   | 1.01              | 1.01   | 1.32   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.19   | 1.70              | 1.70   | 2.21   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 2.16   | 3.08              | 3.08   | 4.01   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 2.16   | 3.08              | 3.08   | 4.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.49   | 0.70              | 0.70   | 0.91   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.53   | 2.18              | 2.18   | 2.84   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.05   | 1.51              | 1.50   | 1.96   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.24   | 1.77              | 1.77   | 2.30   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.16   | 1.66              | 1.66   | 2.16   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.63   | 2.33              | 2.33   | 3.03   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.43   | 2.05              | 2.05   | 2.66   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.55   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.44   | 10.75             | 10.92  | 14.33  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.44   | 10.74             | 10.91  | 14.32  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.48   | 0.68              | 0.68   | 0.89   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.32   | 0.46              | 0.46   | 0.60   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.22   | 4.60              | 4.60   | 5.98   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.48   | 3.55              | 3.55   | 4.61   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.62   | 0.89              | 0.89   | 1.15   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.25   | 0.36              | 0.36   | 0.46   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.27              | 0.27   | 0.36   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.90   | 1.28              | 1.28   | 1.67   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.38   | 3.40              | 3.40   | 4.42   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.59   | 2.28              | 2.28   | 2.96   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.97   | 1.38              | 1.38   | 1.80   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.27   | 1.81              | 1.81   | 2.35   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.27   | 1.81              | 1.81   | 2.35   |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.35   | 0.49              | 0.49   | 0.64   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.66   | 0.95              | 0.95   | 1.23   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.17              | 1.17   | 1.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.00   | 2.86              | 2.86   | 3.72   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.03   | 2.90              | 2.90   | 3.77   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.30   | 0.39   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.60  | 28.22             | 28.54  | 37.37  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.65   | 2.57              | 2.91   | 4.04   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.65   | 2.57              | 2.91   | 4.04   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 19.61  | 28.24             | 28.56  | 37.40  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 19.61  | 28.24             | 28.56  | 37.40  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 19.61  | 28.23             | 28.56  | 37.39  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 19.61  | 28.23             | 28.56  | 37.40  |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.60  | 28.22             | 28.54  | 37.37  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 2.29              | 2.29   | 2.98   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.63              | 0.64   | 0.84   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.61   | 6.59              | 6.59   | 8.57   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.54   | 0.77              | 0.76   | 0.99   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.14   | 1.63              | 1.64   | 2.13   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.31   | 1.88              | 1.89   | 2.46   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.55   | 2.22              | 2.22   | 2.89   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.11   | 3.02              | 3.01   | 3.92   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.52   | 2.17              | 2.17   | 2.82   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.95   | 5.65              | 5.67   | 7.40   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.36   | 3.37              | 3.37   | 4.38   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.10   | 1.57              | 1.57   | 2.04   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 1.02              | 1.02   | 1.32   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 20.15  | 28.80             | 28.78  | 37.43  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 11.19  | 16.00             | 15.99  | 20.79  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 20.23  | 28.91             | 28.89  | 37.58  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 20.17  | 28.82             | 28.81  | 37.46  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 20.15  | 28.80             | 28.78  | 37.43  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.05   | 2.93              | 2.93   | 3.81   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.23   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.39   | 7.71              | 7.70   | 10.02  |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.39   | 7.71              | 7.70   | 10.02  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.72   | 12.46             | 12.46  | 16.20  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.13   | 11.62             | 11.62  | 15.11  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.42   | 6.31              | 6.31   | 8.20   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.63   | 6.62              | 6.62   | 8.60   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.63   | 6.61              | 6.61   | 8.60   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.51   | 0.72              | 0.72   | 0.94   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.48   | 3.54              | 3.54   | 4.61   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.48   | 3.54              | 3.54   | 4.61   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.25   | 3.22              | 3.22   | 4.19   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.25   | 3.22              | 3.22   | 4.19   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.47   | 2.10              | 2.09   | 2.72   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.93   | 1.32              | 1.32   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.24   | 1.77              | 1.77   | 2.30   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.21   | 1.73              | 1.73   | 2.24   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.74   | 2.49              | 2.49   | 3.24   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.95   | 4.21              | 4.21   | 5.47   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.02   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.42   | 0.59              | 0.59   | 0.77   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.77   | 2.54              | 2.53   | 3.30   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.57   | 0.82              | 0.82   | 1.06   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.67   | 0.96              | 0.96   | 1.24   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 19.52  | 28.10             | 28.42  | 37.22  |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.62   | 2.31              | 2.31   | 3.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.70   | 2.43              | 2.43   | 3.16   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.56   | 2.23              | 2.23   | 2.90   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.99   | 4.27              | 4.27   | 5.55   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.99   | 4.27              | 4.27   | 5.56   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.94   | 4.20              | 4.20   | 5.46   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.20   | 0.28              | 0.28   | 0.37   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.00   | 2.85              | 2.85   | 3.71   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.18   | 1.69              | 1.69   | 2.19   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.77   | 1.10              | 1.10   | 1.43   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.22   | 6.03              | 6.03   | 7.84   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.23   | 6.05              | 6.05   | 7.86   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.23   | 6.04              | 6.04   | 7.85   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.32   | 11.90             | 11.94  | 15.55  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.27   | 11.84             | 11.88  | 15.47  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.32   | 11.90             | 11.94  | 15.55  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.61   | 10.89             | 10.92  | 14.23  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 5.53   | 7.91              | 7.90   | 10.28  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 5.53   | 7.91              | 7.90   | 10.28  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 5.53   | 7.91              | 7.90   | 10.28  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.53   | 7.91              | 7.90   | 10.28  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.53   | 7.91              | 7.90   | 10.28  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.16   | 1.65              | 1.65   | 2.15   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.46              | 0.46   | 0.59   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.47   | 4.96              | 4.96   | 6.45   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.63   | 0.89              | 0.89   | 1.16   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.37   | 0.52              | 0.52   | 0.68   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.38   | 0.54              | 0.54   | 0.70   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.34   | 1.91              | 1.91   | 2.48   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.11   | 1.59              | 1.59   | 2.06   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.63   | 5.19              | 5.19   | 6.75   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.61   | 5.15              | 5.15   | 6.70   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.61   | 5.15              | 5.15   | 6.70   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.27   | 0.39              | 0.39   | 0.50   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.66              | 0.66   | 0.86   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.68   | 0.98              | 0.98   | 1.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.92   | 1.33              | 1.34   | 1.75   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.07   | 1.52              | 1.52   | 1.98   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |



**Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.38   | 2.18              | 2.52   | 3.53   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.93   | 1.32              | 1.32   | 1.72   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.83   | 1.19              | 1.18   | 1.54   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.12   | 8.74              | 8.74   | 11.36  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.10   | 8.72              | 8.72   | 11.34  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.01   | 8.59              | 8.58   | 11.16  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.41   | 0.59              | 0.59   | 0.77   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |

Table A-66. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2025

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.21              | 0.21   | 0.27   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.60   | 0.86              | 0.86   | 1.12   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.46   | 0.66              | 0.66   | 0.86   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.16   | 1.65              | 1.65   | 2.15   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.38   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.28   | 7.74              | 7.73   | 9.20   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.32   | 6.55              | 6.55   | 7.79   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.60   | 3.20              | 3.20   | 3.81   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.93   | 1.14              | 1.14   | 1.36   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.31   | 2.85              | 2.85   | 3.39   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.22   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.22   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.55   | 0.68              | 0.68   | 0.81   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.54   | 0.67              | 0.67   | 0.79   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.34              | 0.34   | 0.40   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.06   | 1.30              | 1.30   | 1.55   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.32  | 15.29             | 15.29  | 18.23  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.84   | 1.03              | 1.03   | 1.22   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.55   | 3.14              | 3.13   | 3.73   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.59   | 3.19              | 3.19   | 3.79   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 28.10  | 34.61             | 34.60  | 41.14  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.64  | 31.57             | 31.56  | 37.53  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 28.13  | 34.63             | 34.62  | 41.17  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.10   | 2.59              | 2.59   | 3.08   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.49  | 15.38             | 15.37  | 18.28  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.30  | 15.15             | 15.14  | 18.01  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.49  | 15.38             | 15.37  | 18.28  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.80   | 4.68              | 4.68   | 5.57   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.80   | 4.68              | 4.68   | 5.57   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.68   | 3.50              | 3.53   | 4.28   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.56              | 1.56   | 1.85   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.29   | 6.51              | 6.51   | 7.74   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.29   | 6.52              | 6.52   | 7.75   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.29   | 6.52              | 6.52   | 7.75   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 3.09   | 3.80              | 3.80   | 4.52   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 22.76  | 28.02             | 28.01  | 33.31  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 3.22   | 3.96              | 3.96   | 4.71   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.26   | 5.24              | 5.24   | 6.23   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.02   | 2.40   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.02   | 2.40   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.01              | 2.02   | 2.40   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.90   | 1.11              | 1.11   | 1.32   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.52   | 1.88              | 1.88   | 2.23   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.52   | 1.88              | 1.88   | 2.23   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.52   | 1.88              | 1.88   | 2.23   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.27   | 6.49              | 6.49   | 7.71   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.91  | 13.43             | 13.43  | 15.97  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.58  | 13.03             | 13.02  | 15.49  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.50   | 3.08              | 3.07   | 3.66   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 27.54  | 33.92             | 33.91  | 40.31  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 27.54  | 33.92             | 33.91  | 40.31  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 28.07  | 34.57             | 34.56  | 41.09  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.47              | 0.47   | 0.55   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.81   | 1.00              | 1.00   | 1.18   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.77   | 12.03             | 12.02  | 14.30  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.87   | 12.16             | 12.15  | 14.45  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.44   | 11.62             | 11.62  | 13.82  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 6.57   | 8.09              | 8.08   | 9.61   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.27   | 1.57              | 1.57   | 1.86   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.09   | 1.34              | 1.34   | 1.60   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.93   | 4.84              | 4.84   | 5.75   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 12.33  | 15.19             | 15.18  | 18.05  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 12.32  | 15.17             | 15.17  | 18.04  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.34  | 13.97             | 13.96  | 16.60  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 11.23  | 13.83             | 13.83  | 16.44  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.24   | 2.76              | 2.76   | 3.28   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.73   | 10.76             | 10.75  | 12.78  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.73   | 10.76             | 10.75  | 12.78  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.88   | 9.71              | 9.71   | 11.54  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.43   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.49   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.96   | 3.65              | 3.65   | 4.34   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.91   | 4.82              | 4.82   | 5.73   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 31.19  | 38.41             | 38.39  | 45.65  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 31.83  | 39.19             | 39.18  | 46.59  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.26   | 6.48              | 6.48   | 7.70   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.56   | 5.61              | 5.61   | 6.67   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 10.52  | 12.96             | 12.95  | 15.40  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.76  | 16.95             | 16.94  | 20.14  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.76  | 16.95             | 16.94  | 20.14  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.35   | 7.83              | 7.82   | 9.30   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.35   | 1.67              | 1.67   | 1.99   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.14  | 26.03             | 26.02  | 30.94  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.70  | 25.49             | 25.49  | 30.30  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 20.70  | 25.49             | 25.49  | 30.30  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.76   | 2.16              | 2.16   | 2.57   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.03   | 1.26              | 1.26   | 1.50   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |



**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 1.56   | 1.92              | 1.92   | 2.28   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.85   | 3.51              | 3.51   | 4.17   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.72   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.89   | 2.33              | 2.33   | 2.77   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.87   | 1.08              | 1.07   | 1.28   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 1.93   | 2.37              | 2.37   | 2.82   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.29   | 2.82              | 2.82   | 3.35   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.88   | 4.78              | 4.78   | 5.69   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 7.03   | 8.66              | 8.66   | 10.29  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 7.03   | 8.66              | 8.65   | 10.29  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.60   | 1.97              | 1.97   | 2.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.99   | 6.14              | 6.14   | 7.30   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.44   | 4.23              | 4.23   | 5.03   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.48   | 0.59              | 0.59   | 0.70   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.05   | 4.99              | 4.98   | 5.93   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.80   | 4.68              | 4.68   | 5.56   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.32   | 6.55              | 6.54   | 7.78   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.69   | 5.77              | 5.77   | 6.86   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.97   | 1.20              | 1.20   | 1.42   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 24.26  | 30.73             | 30.83  | 37.00  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.25  | 30.72             | 30.82  | 36.98  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.85   | 1.05              | 1.04   | 1.24   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.56   | 1.92              | 1.92   | 2.28   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.87   | 1.08              | 1.07   | 1.28   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.07   | 1.31              | 1.31   | 1.56   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.07   | 1.31              | 1.31   | 1.56   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.50  | 12.93             | 12.93  | 15.37  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 8.10   | 9.98              | 9.98   | 11.86  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.98   | 2.43              | 2.43   | 2.89   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.79   | 0.97              | 0.97   | 1.16   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.81   | 1.00              | 1.00   | 1.19   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.81   | 1.00              | 1.00   | 1.19   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.63   | 0.77              | 0.77   | 0.92   |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.75   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.75   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.93   | 3.61              | 3.61   | 4.29   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.77   | 9.57              | 9.57   | 11.38  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.60   | 0.74              | 0.74   | 0.87   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.49   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.20   | 6.41              | 6.40   | 7.61   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.16   | 3.89              | 3.89   | 4.63   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.13   | 5.09              | 5.09   | 6.05   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.13   | 5.09              | 5.09   | 6.05   |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.35   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.43   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.13   | 1.39              | 1.39   | 1.65   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.87   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.68   | 0.84              | 0.84   | 0.99   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.68   | 3.30              | 3.30   | 3.92   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.55   | 8.06              | 8.06   | 9.59   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.62   | 8.15              | 8.15   | 9.69   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.75              | 0.75   | 0.90   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.67   | 0.84              | 0.85   | 1.02   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.47              | 0.47   | 0.56   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 64.05  | 80.52             | 80.70  | 96.60  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.25   | 8.11              | 8.32   | 10.53  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.25   | 8.11              | 8.32   | 10.53  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 64.11  | 80.59             | 80.77  | 96.68  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 64.10  | 80.58             | 80.76  | 96.67  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 64.09  | 80.57             | 80.75  | 96.66  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 64.10  | 80.58             | 80.76  | 96.67  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 64.05  | 80.52             | 80.70  | 96.60  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.24   | 6.45              | 6.45   | 7.67   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.06   | 6.23              | 6.22   | 7.40   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.38   | 1.75              | 1.76   | 2.11   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.22              | 1.22   | 1.45   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.99   | 1.22              | 1.22   | 1.45   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.35   | 0.44              | 0.44   | 0.52   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.73   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 15.05  | 18.53             | 18.52  | 22.02  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.85   | 2.27              | 2.27   | 2.70   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.59              | 0.59   | 0.70   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.75   | 2.15              | 2.15   | 2.56   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.71   | 4.61              | 4.61   | 5.49   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.29   | 5.31              | 5.31   | 6.33   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.06   | 6.26              | 6.26   | 7.46   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.89   | 8.49              | 8.48   | 10.09  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.96   | 6.10              | 6.10   | 7.25   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.89  | 15.99             | 16.00  | 19.06  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.55   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.14   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.59   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.70   | 0.87              | 0.87   | 1.03   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.05   | 0.07   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.77   | 0.95              | 0.95   | 1.13   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.70   | 9.48              | 9.48   | 11.27  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 0.73              | 0.73   | 0.87   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.73              | 0.73   | 0.87   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.58   | 4.41              | 4.41   | 5.24   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.32   | 2.86              | 2.86   | 3.40   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 65.79  | 81.01             | 80.98  | 96.29  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 36.58  | 45.04             | 45.03  | 53.54  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 66.04  | 81.32             | 81.30  | 96.67  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 65.87  | 81.10             | 81.08  | 96.41  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 65.79  | 81.01             | 80.98  | 96.29  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.29   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.70   | 8.25              | 8.25   | 9.81   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.59   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.46   | 0.56              | 0.56   | 0.67   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.85   | 4.74              | 4.74   | 5.64   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.60  | 21.67             | 21.67  | 25.76  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.60  | 21.67             | 21.67  | 25.76  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 28.49  | 35.08             | 35.07  | 41.70  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 26.59  | 32.74             | 32.73  | 38.92  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 14.39  | 17.72             | 17.72  | 21.07  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.11  | 18.60             | 18.60  | 22.11  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.10  | 18.59             | 18.59  | 22.10  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.69   | 2.09              | 2.09   | 2.48   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.10   | 9.97              | 9.97   | 11.85  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 8.10   | 9.97              | 9.97   | 11.85  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.36   | 9.07              | 9.07   | 10.78  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.36   | 9.07              | 9.07   | 10.78  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.80   | 5.91              | 5.91   | 7.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.02   | 3.72              | 3.72   | 4.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.04   | 4.97              | 4.97   | 5.91   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.38   | 0.47              | 0.47   | 0.56   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.94   | 4.86              | 4.86   | 5.77   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.43   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.64   | 2.02              | 2.02   | 2.40   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 5.69   | 7.01              | 7.01   | 8.34   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.63   | 11.85             | 11.85  | 14.09  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.63   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.63   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.80   | 2.22              | 2.22   | 2.63   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.33   | 1.64              | 1.64   | 1.95   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 5.79   | 7.13              | 7.13   | 8.48   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.12   | 2.61              | 2.61   | 3.11   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 63.79  | 80.20             | 80.38  | 96.22  |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.28   | 6.50              | 6.50   | 7.73   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.85   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.61   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.43   | 6.69              | 6.69   | 7.95   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.09   | 6.27              | 6.27   | 7.45   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.77   | 12.04             | 12.03  | 14.31  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.77   | 12.04             | 12.04  | 14.31  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.63   | 11.86             | 11.86  | 14.10  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.04   | 1.28              | 1.28   | 1.52   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.62   | 0.76              | 0.76   | 0.91   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.53   | 8.04              | 8.03   | 9.55   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.85   | 4.75              | 4.74   | 5.64   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.85   | 4.75              | 4.74   | 5.64   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 2.37   | 2.91              | 2.91   | 3.46   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 13.79  | 16.98             | 16.97  | 20.18  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.82  | 17.01             | 17.01  | 20.22  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.80  | 17.00             | 16.99  | 20.20  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.15  | 33.62             | 33.63  | 40.06  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.02  | 33.45             | 33.47  | 39.86  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 27.15  | 33.62             | 33.63  | 40.06  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 24.83  | 30.76             | 30.77  | 36.66  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 18.13  | 22.33             | 22.33  | 26.55  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 18.13  | 22.33             | 22.33  | 26.55  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 18.13  | 22.33             | 22.33  | 26.55  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.13  | 22.33             | 22.32  | 26.54  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.13  | 22.33             | 22.32  | 26.54  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.29   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.77   | 4.65              | 4.64   | 5.52   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.05   | 1.29              | 1.29   | 1.53   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 11.32  | 13.94             | 13.93  | 16.57  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.82   | 2.24              | 2.24   | 2.66   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.04   | 2.51              | 2.51   | 2.99   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.18   | 1.46              | 1.45   | 1.73   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.36   | 5.37              | 5.37   | 6.39   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.69   | 0.84              | 0.84   | 1.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.19              | 0.20   | 0.25   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.57   | 4.40              | 4.40   | 5.23   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 11.86  | 14.61             | 14.60  | 17.37  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.77  | 14.49             | 14.49  | 17.23  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 11.77  | 14.49             | 14.49  | 17.23  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.88   | 1.08              | 1.08   | 1.29   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.40   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.61   | 0.73   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.50   | 0.62              | 0.61   | 0.73   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.50   | 0.62              | 0.61   | 0.73   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.49   | 1.83              | 1.83   | 2.17   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.24   | 2.75              | 2.75   | 3.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.81   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.02   | 3.77              | 3.77   | 4.51   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.48   | 4.29              | 4.29   | 5.10   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 2.02              | 2.02   | 2.40   |



**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.11   | 1.36              | 1.36   | 1.62   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.43   | 7.11              | 7.31   | 9.34   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.02   | 3.72              | 3.72   | 4.43   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.81   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.71   | 3.33              | 3.33   | 3.96   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.96  | 24.58             | 24.58  | 29.22  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 19.93  | 24.54             | 24.53  | 29.17  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.62  | 24.16             | 24.15  | 28.71  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.32   | 1.63              | 1.63   | 1.94   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.49              | 0.49   | 0.58   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.52   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.19              | 1.19   | 1.41   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.96   | 1.19              | 1.19   | 1.41   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-67. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.95   | 1.17              | 1.17   | 1.39   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.97   | 2.43              | 2.42   | 2.88   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.78   | 4.65              | 4.65   | 5.53   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.15   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.67   | 0.83              | 0.83   | 0.98   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.89   | 2.28              | 2.28   | 2.67   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 9.10   | 10.96             | 10.96  | 12.84  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.70   | 9.28              | 9.28   | 10.87  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.77   | 4.54              | 4.54   | 5.32   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.34   | 1.62              | 1.62   | 1.89   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.54   | 0.65              | 0.65   | 0.76   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.35   | 4.04              | 4.04   | 4.73   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.17   | 5.02              | 5.02   | 5.88   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.17   | 5.02              | 5.02   | 5.88   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.86   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.56   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.53   | 1.84              | 1.84   | 2.16   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 17.85  | 21.66             | 21.66  | 25.42  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.21   | 1.46              | 1.46   | 1.71   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.47              | 0.47   | 0.55   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.69   | 4.45              | 4.45   | 5.21   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.75   | 4.52              | 4.52   | 5.29   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 40.71  | 49.03             | 49.02  | 57.42  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 37.15  | 44.74             | 44.73  | 52.39  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 40.74  | 49.07             | 49.06  | 57.46  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.45   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.06   | 3.69              | 3.69   | 4.32   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 18.09  | 21.79             | 21.79  | 25.51  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 17.83  | 21.48             | 21.47  | 25.15  |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.09  | 21.79             | 21.79  | 25.51  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.51   | 6.64              | 6.63   | 7.77   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.51   | 6.64              | 6.63   | 7.77   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.87   | 4.97              | 4.97   | 5.93   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.33              | 0.33   | 0.39   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.21              | 2.20   | 2.58   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.66   | 9.22              | 9.22   | 10.80  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.66   | 9.23              | 9.23   | 10.80  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.66   | 9.23              | 9.23   | 10.80  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.89   | 2.28              | 2.28   | 2.67   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 4.53   | 5.46              | 5.45   | 6.39   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 33.00  | 39.74             | 39.73  | 46.53  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 4.66   | 5.62              | 5.62   | 6.58   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.16   | 7.42              | 7.42   | 8.69   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.34   | 2.85              | 2.85   | 3.35   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.31   | 1.58              | 1.58   | 1.85   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.11   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.11   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.11   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.63   | 9.20              | 9.19   | 10.77  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 15.85  | 19.09             | 19.08  | 22.35  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.39  | 18.53             | 18.53  | 21.70  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.62   | 4.36              | 4.36   | 5.10   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 39.93  | 48.09             | 48.08  | 56.31  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 39.93  | 48.09             | 48.08  | 56.31  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 40.70  | 49.02             | 49.01  | 57.40  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.18   | 1.43              | 1.43   | 1.67   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.18   | 1.43              | 1.43   | 1.67   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.18   | 1.42              | 1.42   | 1.66   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.15  | 17.05             | 17.04  | 19.96  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 14.30  | 17.22             | 17.22  | 20.17  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 13.67  | 16.47             | 16.47  | 19.29  |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 9.53   | 11.48             | 11.48  | 13.44  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.85   | 2.22              | 2.22   | 2.60   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.58   | 1.90              | 1.90   | 2.23   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.71   | 6.87              | 6.87   | 8.05   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 17.88  | 21.53             | 21.53  | 25.21  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.86  | 21.51             | 21.51  | 25.19  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.43  | 19.78             | 19.78  | 23.16  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.28  | 19.61             | 19.61  | 22.97  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.26   | 3.92              | 3.92   | 4.60   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.65  | 15.24             | 15.24  | 17.84  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 12.65  | 15.24             | 15.24  | 17.84  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.42  | 13.75             | 13.75  | 16.10  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.15   | 5.00              | 5.00   | 5.85   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.68   | 6.84              | 6.84   | 8.01   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 45.18  | 54.42             | 54.41  | 63.72  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 46.11  | 55.54             | 55.52  | 65.03  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.62   | 9.18              | 9.18   | 10.75  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 6.61   | 7.96              | 7.95   | 9.32   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 15.25  | 18.37             | 18.37  | 21.51  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.94  | 24.02             | 24.02  | 28.13  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 19.94  | 24.02             | 24.02  | 28.13  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.85   | 9.46              | 9.46   | 11.08  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.43   | 2.93              | 2.93   | 3.44   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.62  | 36.89             | 36.88  | 43.19  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 29.99  | 36.13             | 36.12  | 42.30  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 29.99  | 36.13             | 36.12  | 42.30  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.79   | 0.95              | 0.95   | 1.12   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.47   | 2.98              | 2.98   | 3.49   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.49   | 1.79              | 1.79   | 2.10   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.43   | 1.73              | 1.73   | 2.02   |



**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.12   | 2.49   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 2.30   | 2.77              | 2.77   | 3.24   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 4.13   | 4.98              | 4.97   | 5.83   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.70   | 0.85              | 0.85   | 0.99   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.74   | 3.30              | 3.30   | 3.86   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.26   | 1.52              | 1.52   | 1.78   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 2.79   | 3.36              | 3.36   | 3.94   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.28   | 3.95              | 3.95   | 4.63   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.63   | 6.78              | 6.78   | 7.94   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 10.17  | 12.24             | 12.24  | 14.34  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 10.17  | 12.25             | 12.24  | 14.34  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.32   | 2.79              | 2.79   | 3.27   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.38   | 0.46              | 0.46   | 0.54   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.22   | 8.70              | 8.70   | 10.19  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.98   | 6.00              | 6.00   | 7.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.69   | 0.84              | 0.84   | 0.98   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.87   | 7.06              | 7.06   | 8.27   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.50   | 6.63              | 6.63   | 7.76   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.70   | 9.28              | 9.27   | 10.86  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.80   | 8.20              | 8.19   | 9.60   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.41   | 1.70              | 1.70   | 1.99   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 35.11  | 43.58             | 43.58  | 51.48  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 35.09  | 43.56             | 43.56  | 51.46  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.44   |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.23   | 1.48              | 1.48   | 1.73   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.25   | 2.71              | 2.71   | 3.17   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.28   | 1.54              | 1.54   | 1.80   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.54   | 1.86              | 1.86   | 2.18   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.54   | 1.86              | 1.86   | 2.18   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.54   | 1.86              | 1.86   | 2.17   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.79   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 15.21  | 18.32             | 18.32  | 21.45  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 11.74  | 14.14             | 14.14  | 16.55  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 2.77   | 3.34              | 3.34   | 3.91   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.62   | 0.75              | 0.75   | 0.88   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.46   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.18   | 1.42              | 1.42   | 1.67   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.18   | 1.42              | 1.41   | 1.66   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.18   | 1.42              | 1.41   | 1.66   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.91   | 1.09              | 1.09   | 1.28   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.47              | 0.47   | 0.55   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.69   | 0.83              | 0.83   | 0.97   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.74   | 0.89              | 0.89   | 1.04   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.74   | 0.89              | 0.89   | 1.04   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.25   | 5.12              | 5.12   | 5.99   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.26  | 13.56             | 13.56  | 15.88  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.87   | 1.04              | 1.04   | 1.22   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.58   | 0.69              | 0.69   | 0.81   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.54   | 9.08              | 9.07   | 10.63  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.58   | 5.52              | 5.52   | 6.46   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.99   | 7.21              | 7.21   | 8.44   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.99   | 7.21              | 7.21   | 8.44   |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.33   | 1.60              | 1.60   | 1.88   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.64   | 1.97              | 1.97   | 2.31   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.76   | 2.12              | 2.12   | 2.48   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.87   | 1.04              | 1.04   | 1.22   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 3.14   | 3.78              | 3.78   | 4.42   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.14   | 3.78              | 3.78   | 4.42   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.14   | 3.78              | 3.78   | 4.42   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.14   | 3.78              | 3.78   | 4.42   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.43   | 1.73              | 1.73   | 2.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.88   | 4.67              | 4.67   | 5.47   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 9.51   | 11.45             | 11.45  | 13.41  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.60   | 11.56             | 11.56  | 13.54  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.91   | 1.09              | 1.09   | 1.28   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.96   | 1.20              | 1.20   | 1.41   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.56   | 0.67              | 0.67   | 0.79   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.66   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 92.96  | 114.43            | 114.43 | 134.87 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 7.41   | 11.39             | 11.42  | 14.22  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 7.41   | 11.39             | 11.42  | 14.22  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 93.05  | 114.54            | 114.54 | 134.99 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 93.04  | 114.53            | 114.53 | 134.98 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 93.02  | 114.50            | 114.50 | 134.95 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 93.03  | 114.52            | 114.52 | 134.97 |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 92.96  | 114.43            | 114.43 | 134.87 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.59   | 9.15              | 9.14   | 10.71  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.33   | 8.83              | 8.82   | 10.34  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.64   | 0.78              | 0.78   | 0.91   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.93   | 2.40              | 2.40   | 2.84   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.03   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.03   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.70   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 21.79  | 26.24             | 26.23  | 30.73  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.64   | 3.18              | 3.18   | 3.72   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.53   | 3.05              | 3.05   | 3.57   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.30   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.63   | 0.76              | 0.76   | 0.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.38   | 6.53              | 6.53   | 7.66   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.21   | 7.53              | 7.52   | 8.83   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.33   | 8.88              | 8.88   | 10.41  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 9.99   | 12.03             | 12.03  | 14.08  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.18   | 8.65              | 8.65   | 10.13  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.69  | 22.68             | 22.67  | 26.61  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.05   | 1.27              | 1.27   | 1.49   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.62   | 0.74              | 0.74   | 0.87   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.23   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.28   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.12   | 1.35              | 1.35   | 1.58   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.48   | 0.58              | 0.58   | 0.68   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.15  | 13.43             | 13.43  | 15.73  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.82   | 0.98              | 0.98   | 1.15   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.82   | 0.98              | 0.98   | 1.15   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.18   | 6.24              | 6.24   | 7.31   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.37   | 4.06              | 4.05   | 4.75   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 95.34  | 114.82            | 114.80 | 134.45 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 53.08  | 63.93             | 63.92  | 74.86  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 95.71  | 115.28            | 115.25 | 134.98 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 95.51  | 115.03            | 115.00 | 134.69 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 95.34  | 114.82            | 114.80 | 134.45 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 9.73   | 11.71             | 11.71  | 13.72  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.33   | 0.39              | 0.39   | 0.46   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.85   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.18   | 1.43              | 1.43   | 1.67   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.83   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.74   | 0.90              | 0.90   | 1.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.58   | 6.72              | 6.72   | 7.87   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 25.50  | 30.71             | 30.70  | 35.96  |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 25.50  | 30.71             | 30.70  | 35.96  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 41.30  | 49.74             | 49.73  | 58.24  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 38.57  | 46.45             | 46.44  | 54.39  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 20.81  | 25.07             | 25.06  | 29.35  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.87  | 26.34             | 26.34  | 30.85  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.86  | 26.33             | 26.32  | 30.82  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.50   | 3.01              | 3.01   | 3.53   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.00   | 1.20              | 1.20   | 1.41   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.73  | 14.13             | 14.12  | 16.54  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 11.73  | 14.13             | 14.12  | 16.54  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 10.68  | 12.86             | 12.86  | 15.06  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.68  | 12.86             | 12.86  | 15.06  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.99   | 8.42              | 8.41   | 9.85   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 4.37   | 5.27              | 5.27   | 6.17   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 5.85   | 7.05              | 7.05   | 8.25   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.58   | 0.69              | 0.69   | 0.81   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 5.72   | 6.89              | 6.89   | 8.06   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.37   | 2.86              | 2.86   | 3.35   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.25   | 9.94              | 9.93   | 11.63  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 13.96  | 16.81             | 16.81  | 19.68  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.89   | 2.28              | 2.28   | 2.67   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 8.39   | 10.10             | 10.10  | 11.83  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 2.56   | 3.08              | 3.08   | 3.60   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 2.56   | 3.08              | 3.08   | 3.60   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.99   | 3.60              | 3.60   | 4.21   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 92.60  | 113.99            | 113.99 | 134.36 |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.65   | 9.21              | 9.21   | 10.79  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.61   | 0.73              | 0.73   | 0.86   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.25   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 7.64   | 9.20              | 9.20   | 10.77  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.38   | 8.89              | 8.88   | 10.40  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 14.19  | 17.09             | 17.09  | 20.02  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 14.19  | 17.10             | 17.09  | 20.02  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 14.01  | 16.89             | 16.88  | 19.78  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.53   | 1.85              | 1.85   | 2.16   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.85   | 1.02              | 1.02   | 1.19   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.47   | 11.41             | 11.40  | 13.36  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.58   | 6.72              | 6.72   | 7.87   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 5.58   | 6.72              | 6.72   | 7.87   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 3.16   | 3.81              | 3.81   | 4.46   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 19.99  | 24.07             | 24.07  | 28.19  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 20.01  | 24.11             | 24.10  | 28.23  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 20.01  | 24.10             | 24.09  | 28.22  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.39  | 47.71             | 47.70  | 55.96  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.18  | 47.46             | 47.46  | 55.67  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 39.39  | 47.71             | 47.70  | 55.96  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 36.00  | 43.63             | 43.62  | 51.18  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 26.38  | 31.78             | 31.77  | 37.21  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 26.38  | 31.78             | 31.77  | 37.21  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 26.38  | 31.78             | 31.77  | 37.21  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 26.37  | 31.77             | 31.76  | 37.20  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.37  | 31.77             | 31.76  | 37.20  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 5.47   | 6.58              | 6.58   | 7.71   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.52   | 1.83              | 1.83   | 2.15   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 16.38  | 19.73             | 19.73  | 23.10  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.60   | 3.13              | 3.13   | 3.67   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.06   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.06   |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.36   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.96   | 3.56              | 3.56   | 4.17   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.69   | 2.03              | 2.03   | 2.38   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.74   | 2.09              | 2.09   | 2.45   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 6.32   | 7.62              | 7.61   | 8.92   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.45   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.17   | 0.27              | 0.27   | 0.34   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 5.06   | 6.10              | 6.10   | 7.14   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 17.18  | 20.70             | 20.69  | 24.24  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 17.05  | 20.54             | 20.53  | 24.05  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 17.05  | 20.54             | 20.53  | 24.05  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.28   | 1.54              | 1.54   | 1.80   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.72   | 0.87              | 0.87   | 1.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.09   | 2.52              | 2.52   | 2.95   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.24   | 3.90              | 3.90   | 4.57   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.58   | 0.70              | 0.70   | 0.82   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.43   | 0.52              | 0.52   | 0.60   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.37   | 5.35              | 5.34   | 6.29   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.53   | 0.64              | 0.64   | 0.75   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.06   | 6.09              | 6.09   | 7.13   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.37   | 2.86              | 2.86   | 3.35   |



**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.60   | 1.93              | 1.93   | 2.26   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6.35   | 10.12             | 10.14  | 12.73  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.38   | 5.28              | 5.28   | 6.18   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 0.97              | 0.97   | 1.13   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.46   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.92   | 4.72              | 4.72   | 5.53   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 28.92  | 34.84             | 34.83  | 40.79  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 28.87  | 34.77             | 34.76  | 40.71  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 28.42  | 34.23             | 34.22  | 40.08  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.87   | 2.26              | 2.25   | 2.64   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.65   | 0.79              | 0.79   | 0.93   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.53   | 0.63              | 0.63   | 0.74   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.40   | 1.68              | 1.68   | 1.97   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.40   | 1.68              | 1.68   | 1.97   |

**Table A-68. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acetaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.20   | 2.65              | 2.64   | 3.10   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.44   | 1.74              | 1.74   | 2.03   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.69   | 0.83              | 0.83   | 0.97   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 2.85   | 3.44              | 3.44   | 4.02   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 2.20   | 2.65              | 2.65   | 3.10   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 5.47   | 6.59              | 6.59   | 7.72   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 1.14   | 1.37              | 1.37   | 1.61   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.96   | 1.16              | 1.16   | 1.36   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-69. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.52   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.69   | 1.04              | 1.12   | 1.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.21   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.14   | 1.63              | 1.63   | 2.11   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.32   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.55   | 0.78              | 0.78   | 1.01   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.55   | 0.79              | 0.79   | 1.03   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.34              | 0.34   | 0.44   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.25   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.01   | 1.44              | 1.44   | 1.87   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.90   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.22   | 1.75              | 1.74   | 2.27   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.22   | 1.75              | 1.74   | 2.27   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.63              | 0.63   | 0.81   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.42   | 0.60              | 0.60   | 0.78   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.29   | 0.42              | 0.42   | 0.54   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.78              | 0.78   | 1.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.55   | 0.78              | 0.78   | 1.01   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.92   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.39   | 0.55              | 0.55   | 0.72   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.39   | 1.98              | 1.98   | 2.57   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.41   | 2.02              | 2.02   | 2.62   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.29              | 0.29   | 0.38   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.87   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.13   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.13   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.92   | 1.31              | 1.31   | 1.70   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.92   | 1.31              | 1.31   | 1.70   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |



**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.23   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.31   | 0.45              | 0.45   | 0.58   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.28   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.05   | 1.50              | 1.51   | 1.96   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.05   | 1.50              | 1.51   | 1.96   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.47   | 0.67              | 0.67   | 0.86   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.24   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.35   | 0.49              | 0.49   | 0.64   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.29   | 0.42              | 0.42   | 0.54   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.78   | 3.97              | 3.98   | 5.17   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.79   | 3.98              | 3.98   | 5.17   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 2.79   | 3.98              | 3.98   | 5.17   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.79   | 3.98              | 3.98   | 5.17   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.79   | 3.98              | 3.98   | 5.17   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.78   | 3.97              | 3.98   | 5.17   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.67   | 0.95              | 0.95   | 1.24   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.27              | 0.27   | 0.35   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.44              | 0.44   | 0.57   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.41   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.72   | 1.07              | 1.16   | 1.56   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.92   | 4.17              | 4.17   | 5.42   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.62   | 2.32              | 2.32   | 3.01   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.93   | 4.19              | 4.18   | 5.44   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.93   | 4.17              | 4.17   | 5.42   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.92   | 4.17              | 4.17   | 5.42   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.30   | 0.42              | 0.42   | 0.55   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.78   | 1.12              | 1.12   | 1.45   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.78   | 1.12              | 1.12   | 1.45   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.26   | 1.80              | 1.80   | 2.34   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.18   | 1.68              | 1.68   | 2.19   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.64   | 0.91              | 0.91   | 1.19   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.67   | 0.96              | 0.96   | 1.25   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.67   | 0.96              | 0.96   | 1.24   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.14   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.36   | 0.51              | 0.51   | 0.67   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.61   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.13   | 0.19              | 0.19   | 0.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.25              | 0.25   | 0.32   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.61              | 0.61   | 0.79   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 2.77   | 3.96              | 3.96   | 5.15   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.33              | 0.33   | 0.43   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.43   | 0.62              | 0.62   | 0.80   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.61              | 0.61   | 0.79   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.14   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.88              | 0.88   | 1.14   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.61   | 0.87              | 0.87   | 1.14   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.22   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.19   | 1.70              | 1.70   | 2.21   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.20   | 1.71              | 1.71   | 2.22   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.10   | 1.56              | 1.56   | 2.03   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.80   | 1.14              | 1.14   | 1.49   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.50   | 0.72              | 0.72   | 0.93   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.19   | 0.28              | 0.28   | 0.36   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.75              | 0.75   | 0.98   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.18   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |



**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.89   | 1.27              | 1.27   | 1.64   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.89   | 1.26              | 1.26   | 1.64   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.87   | 1.24              | 1.24   | 1.62   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-70. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.31   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.91   | 1.12              | 1.12   | 1.33   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.77   | 0.95              | 0.94   | 1.12   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.55   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.20   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.49   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.23   | 3.15              | 3.20   | 3.95   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.45              | 0.45   | 0.54   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.06   | 4.99              | 4.99   | 5.93   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.70   | 4.56              | 4.56   | 5.41   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.06   | 5.00              | 5.00   | 5.93   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.80   | 2.22              | 2.22   | 2.63   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.78   | 2.19              | 2.19   | 2.60   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.80   | 2.22              | 2.22   | 2.63   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.80   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.55   | 0.68              | 0.68   | 0.80   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.27   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.12   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.45   | 0.55              | 0.55   | 0.65   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.29   | 4.04              | 4.04   | 4.80   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.46   | 0.57              | 0.57   | 0.68   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.61   | 0.76              | 0.76   | 0.90   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.34   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.11   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.58   | 1.94              | 1.94   | 2.30   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.53   | 1.88              | 1.88   | 2.23   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.53   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.98   | 4.89              | 4.89   | 5.81   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.98   | 4.89              | 4.89   | 5.81   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.05   | 4.99              | 4.99   | 5.92   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.41   | 1.74              | 1.74   | 2.06   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.43   | 1.75              | 1.75   | 2.08   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.36   | 1.68              | 1.68   | 1.99   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.95   | 1.17              | 1.17   | 1.39   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.78   | 2.19              | 2.19   | 2.60   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.78   | 2.19              | 2.19   | 2.60   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.64   | 2.02              | 2.01   | 2.39   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.62   | 2.00              | 2.00   | 2.37   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.84   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.26   | 1.55              | 1.55   | 1.84   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.14   | 1.40              | 1.40   | 1.66   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.63   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.50   | 5.54              | 5.54   | 6.58   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 4.60   | 5.66              | 5.65   | 6.72   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.94              | 0.94   | 1.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.66   | 0.81              | 0.81   | 0.96   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.99   | 2.45              | 2.44   | 2.90   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.99   | 2.45              | 2.44   | 2.90   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.34   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 3.05   | 3.76              | 3.75   | 4.46   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.37   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.37   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |



**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.28   | 0.34              | 0.34   | 0.41   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.48   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.56   | 0.69              | 0.69   | 0.82   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.02   | 1.25              | 1.25   | 1.48   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.02   | 1.25              | 1.25   | 1.48   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.72   | 0.89              | 0.89   | 1.05   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.50   | 0.61              | 0.61   | 0.73   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.58   | 0.72              | 0.72   | 0.85   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.55   | 0.68              | 0.67   | 0.80   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.77   | 0.94              | 0.94   | 1.12   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.68   | 0.83              | 0.83   | 0.99   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 3.42   | 4.23              | 4.23   | 5.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.42   | 4.23              | 4.23   | 5.03   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.52   | 1.87              | 1.87   | 2.22   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.42   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.12   | 1.38              | 1.38   | 1.64   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.75   | 0.92              | 0.92   | 1.10   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.46   | 0.56              | 0.56   | 0.67   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.60   | 0.73              | 0.73   | 0.87   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.60   | 0.73              | 0.73   | 0.87   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.46   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.95   | 1.16              | 1.16   | 1.38   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.96   | 1.18              | 1.18   | 1.40   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.14   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.07   | 11.18             | 11.18  | 13.28  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.58   | 0.73              | 0.73   | 0.88   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.58   | 0.73              | 0.73   | 0.88   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 9.07   | 11.19             | 11.19  | 13.30  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 9.07   | 11.19             | 11.19  | 13.29  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 9.07   | 11.18             | 11.18  | 13.29  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 9.07   | 11.19             | 11.19  | 13.29  |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.07   | 11.18             | 11.18  | 13.28  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.76   | 0.93              | 0.93   | 1.11   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.73   | 0.90              | 0.90   | 1.07   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.17   | 2.67              | 2.67   | 3.17   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.62   | 0.76              | 0.76   | 0.90   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.73   | 0.89              | 0.89   | 1.06   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.00   | 1.22              | 1.22   | 1.45   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.31   | 3.25              | 3.30   | 4.07   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.11   | 1.37              | 1.37   | 1.62   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.50   | 11.69             | 11.69  | 13.88  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 5.28   | 6.50              | 6.50   | 7.72   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 9.54   | 11.74             | 11.73  | 13.94  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.51   | 11.70             | 11.70  | 13.90  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.50   | 11.69             | 11.69  | 13.88  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.41   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.71   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.71   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.11   | 5.06              | 5.06   | 6.01   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.84   | 4.72              | 4.72   | 5.61   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.08   | 2.56              | 2.56   | 3.04   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.18   | 2.68              | 2.68   | 3.19   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.18   | 2.68              | 2.68   | 3.19   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.30              | 0.30   | 0.36   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.17   | 1.44              | 1.44   | 1.71   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.06   | 1.31              | 1.31   | 1.55   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.69   | 0.85              | 0.85   | 1.01   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.44   | 0.54              | 0.54   | 0.64   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.58   | 0.72              | 0.72   | 0.85   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.82   | 1.01              | 1.01   | 1.20   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.39   | 1.71              | 1.71   | 2.03   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.84   | 1.03              | 1.03   | 1.22   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 9.03   | 11.13             | 11.13  | 13.23  |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.76   | 0.94              | 0.94   | 1.11   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.27   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.78   | 0.97              | 0.97   | 1.15   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 0.90              | 0.90   | 1.07   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.41   | 1.74              | 1.73   | 2.06   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.41   | 1.74              | 1.74   | 2.06   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.39   | 1.71              | 1.71   | 2.03   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.94   | 1.16              | 1.16   | 1.38   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.91   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.00   | 2.46              | 2.45   | 2.92   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.99   | 2.45              | 2.45   | 2.91   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.90   | 4.80              | 4.80   | 5.70   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.88   | 4.77              | 4.77   | 5.67   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.90   | 4.80              | 4.80   | 5.70   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.56   | 4.38              | 4.38   | 5.21   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 2.62   | 3.22              | 3.22   | 3.83   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.82   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.62   | 3.22              | 3.22   | 3.82   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.54   | 0.67              | 0.67   | 0.80   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 1.63   | 2.01              | 2.01   | 2.39   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.43   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.63   | 0.78              | 0.78   | 0.92   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.75   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.71   | 2.11              | 2.11   | 2.50   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.70   | 2.09              | 2.09   | 2.48   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.70   | 2.09              | 2.09   | 2.48   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.47   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.43   | 0.53              | 0.53   | 0.64   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.74   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |



**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.46   | 0.58              | 0.59   | 0.70   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.88   | 3.55              | 3.55   | 4.21   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.88   | 3.54              | 3.54   | 4.20   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.83   | 3.49              | 3.49   | 4.14   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.23              | 0.23   | 0.28   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-71. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.28   | 0.35              | 0.35   | 0.42   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.55   | 0.67              | 0.67   | 0.80   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.31   | 1.58              | 1.58   | 1.85   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.11   | 1.34              | 1.34   | 1.57   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.54   | 0.65              | 0.65   | 0.77   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.48   | 0.58              | 0.58   | 0.68   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.60   | 0.72              | 0.72   | 0.85   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.60   | 0.72              | 0.72   | 0.85   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.20   | 4.47              | 4.48   | 5.45   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.64              | 0.64   | 0.75   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.54   | 0.65              | 0.65   | 0.76   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.88   | 7.07              | 7.07   | 8.28   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.36   | 6.45              | 6.45   | 7.55   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.88   | 7.07              | 7.07   | 8.29   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.44   | 0.53              | 0.53   | 0.62   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.57   | 3.10              | 3.10   | 3.63   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.61   | 3.14              | 3.14   | 3.68   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.12   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.12   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.53   | 0.65              | 0.65   | 0.76   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.11   | 1.33              | 1.33   | 1.56   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.65   | 0.79              | 0.79   | 0.92   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.76   | 5.73              | 5.73   | 6.71   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.67   | 0.81              | 0.81   | 0.95   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.89   | 1.07              | 1.07   | 1.25   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.10   | 1.33              | 1.33   | 1.55   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.29   | 2.75              | 2.75   | 3.22   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.22   | 2.67              | 2.67   | 3.13   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.76   | 6.93              | 6.93   | 8.12   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.76   | 6.93              | 6.93   | 8.12   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.87   | 7.07              | 7.06   | 8.28   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.04   | 2.46              | 2.46   | 2.88   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.06   | 2.48              | 2.48   | 2.91   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.97   | 2.37              | 2.37   | 2.78   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Acrolein 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.38   | 1.65              | 1.65   | 1.94   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.27   | 0.32              | 0.32   | 0.38   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.58   | 3.10              | 3.10   | 3.64   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.58   | 3.10              | 3.10   | 3.63   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.37   | 2.85              | 2.85   | 3.34   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.35   | 2.83              | 2.83   | 3.31   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.66   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.57   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.57   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.65   | 1.98              | 1.98   | 2.32   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.15   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 6.52   | 7.84              | 7.84   | 9.19   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.66   | 8.00              | 8.00   | 9.38   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.10   | 1.32              | 1.32   | 1.55   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.95   | 1.15              | 1.15   | 1.34   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.20   | 2.65              | 2.65   | 3.10   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.88   | 3.46              | 3.46   | 4.06   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.88   | 3.46              | 3.46   | 4.06   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.13   | 1.36              | 1.36   | 1.60   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.35   | 0.42              | 0.42   | 0.49   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.42   | 5.32              | 5.31   | 6.23   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.33   | 5.21              | 5.20   | 6.10   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.33   | 5.21              | 5.20   | 6.10   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.43              | 0.43   | 0.50   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.21   | 0.26              | 0.26   | 0.30   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |



**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.47   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.84   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.56   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.40   | 0.48              | 0.48   | 0.57   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.81   | 0.98              | 0.98   | 1.14   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.47   | 1.76              | 1.76   | 2.07   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.47   | 1.77              | 1.76   | 2.07   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.47   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.04   | 1.25              | 1.25   | 1.47   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.72   | 0.86              | 0.86   | 1.01   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.85   | 1.02              | 1.02   | 1.19   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.79   | 0.96              | 0.96   | 1.12   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.11   | 1.34              | 1.34   | 1.57   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.98   | 1.18              | 1.18   | 1.38   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.95   | 5.99              | 5.99   | 7.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.95   | 5.99              | 5.98   | 7.02   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.20   | 2.64              | 2.64   | 3.09   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.69   | 2.04              | 2.04   | 2.39   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.40   | 0.48              | 0.48   | 0.56   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.21              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.18   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.86   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.62   | 1.95              | 1.95   | 2.29   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.09   | 1.31              | 1.31   | 1.53   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.66   | 0.80              | 0.80   | 0.93   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.86   | 1.04              | 1.04   | 1.22   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.86   | 1.04              | 1.04   | 1.22   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.19   | 0.23              | 0.23   | 0.27   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.28              | 0.28   | 0.33   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.36   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.45   | 0.54              | 0.54   | 0.64   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.54              | 0.54   | 0.64   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.45   | 0.54              | 0.54   | 0.64   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.45   | 0.54              | 0.54   | 0.64   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.56   | 0.67              | 0.67   | 0.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.37   | 1.65              | 1.65   | 1.93   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.39   | 1.67              | 1.67   | 1.95   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.16  | 15.86             | 15.86  | 18.59  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.81   | 1.01              | 1.01   | 1.19   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.81   | 1.01              | 1.01   | 1.19   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 13.17  | 15.88             | 15.87  | 18.61  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 13.17  | 15.87             | 15.87  | 18.61  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 13.17  | 15.87             | 15.87  | 18.60  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 13.17  | 15.87             | 15.87  | 18.61  |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.16  | 15.86             | 15.86  | 18.59  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.10   | 1.32              | 1.32   | 1.54   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.27              | 1.27   | 1.49   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.14   | 3.78              | 3.78   | 4.43   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.54   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.37   | 0.44              | 0.44   | 0.51   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.77   | 0.93              | 0.93   | 1.09   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.89   | 1.07              | 1.07   | 1.26   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.05   | 1.27              | 1.27   | 1.48   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.44   | 1.73              | 1.73   | 2.03   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.04   | 1.25              | 1.25   | 1.46   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.33   | 4.62              | 4.63   | 5.62   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.61   | 1.94              | 1.94   | 2.27   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.17   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.05   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.58              | 0.58   | 0.68   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 13.76  | 16.55             | 16.55  | 19.39  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 7.66   | 9.21              | 9.21   | 10.79  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13.81  | 16.62             | 16.61  | 19.46  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.78  | 16.58             | 16.58  | 19.42  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 13.76  | 16.55             | 16.55  | 19.39  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.40   | 1.69              | 1.69   | 1.98   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.24   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.68   | 4.43              | 4.43   | 5.18   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.68   | 4.43              | 4.43   | 5.18   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.96   | 7.17              | 7.17   | 8.40   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.57   | 6.70              | 6.69   | 7.84   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.00   | 3.61              | 3.61   | 4.23   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.16   | 3.80              | 3.80   | 4.45   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.15   | 3.79              | 3.79   | 4.44   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.36   | 0.43              | 0.43   | 0.51   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.69   | 2.04              | 2.04   | 2.38   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.69   | 2.04              | 2.04   | 2.38   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.54   | 1.85              | 1.85   | 2.17   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.54   | 1.85              | 1.85   | 2.17   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.01   | 1.21              | 1.21   | 1.42   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.63   | 0.76              | 0.76   | 0.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.84   | 1.02              | 1.02   | 1.19   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 0.99              | 0.99   | 1.16   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.19   | 1.43              | 1.43   | 1.68   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.01   | 2.42              | 2.42   | 2.84   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.38   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.21   | 1.46              | 1.46   | 1.71   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.43   | 0.52              | 0.52   | 0.61   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 13.11  | 15.80             | 15.80  | 18.52  |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.10   | 1.33              | 1.33   | 1.56   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.12   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.10   | 1.33              | 1.33   | 1.55   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.06   | 1.28              | 1.28   | 1.50   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.05   | 2.46              | 2.46   | 2.88   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 2.05   | 2.46              | 2.46   | 2.88   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.02   | 2.43              | 2.43   | 2.85   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.31   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.37   | 1.64              | 1.64   | 1.93   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.46   | 0.55              | 0.55   | 0.64   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.88   | 3.47              | 3.47   | 4.06   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.89   | 3.47              | 3.47   | 4.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.89   | 3.47              | 3.47   | 4.07   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.65   | 6.80              | 6.80   | 7.97   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.62   | 6.76              | 6.76   | 7.92   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.65   | 6.80              | 6.80   | 7.97   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.16   | 6.21              | 6.21   | 7.28   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.81   | 4.58              | 4.58   | 5.36   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.81   | 4.58              | 4.58   | 5.36   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.81   | 4.58              | 4.58   | 5.36   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.81   | 4.58              | 4.58   | 5.36   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.81   | 4.58              | 4.58   | 5.36   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.22   | 0.26              | 0.26   | 0.31   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.36   | 2.84              | 2.84   | 3.33   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.45              | 0.45   | 0.53   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.43   | 0.51              | 0.51   | 0.60   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.30              | 0.30   | 0.35   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.91   | 1.10              | 1.10   | 1.29   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2.48   | 2.98              | 2.98   | 3.49   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.46   | 2.96              | 2.96   | 3.47   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.46   | 2.96              | 2.96   | 3.47   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.47   | 0.56              | 0.56   | 0.66   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.63   | 0.76              | 0.76   | 0.89   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |



**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.66   | 0.83              | 0.83   | 0.98   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.63   | 0.76              | 0.76   | 0.89   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.57   | 0.68              | 0.68   | 0.80   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.17   | 5.02              | 5.02   | 5.88   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.17   | 5.01              | 5.01   | 5.87   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.10   | 4.93              | 4.93   | 5.78   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.27   | 0.33              | 0.32   | 0.38   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-72. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Acrolein 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.45   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
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| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-73. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Benzene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.62              | 0.66   | 0.87   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.47              | 0.48   | 0.63   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.16   | 0.23              | 0.24   | 0.32   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.26   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.07              | 0.08   | 0.10   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 1.15              | 1.20   | 1.59   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.28   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.28   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.67   | 2.40              | 2.45   | 3.21   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.51   | 2.17              | 2.21   | 2.89   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.67   | 2.40              | 2.45   | 3.21   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.24   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.72   | 1.04              | 1.05   | 1.38   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.71   | 1.02              | 1.03   | 1.35   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.72   | 1.04              | 1.05   | 1.38   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.39              | 0.42   | 0.56   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.27   | 0.39              | 0.42   | 0.56   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.31              | 0.34   | 0.46   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.32   | 0.46              | 0.47   | 0.62   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.36   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.34   | 1.93              | 1.97   | 2.58   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.08   | 0.11   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.37              | 0.39   | 0.51   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.64   | 0.92              | 0.93   | 1.22   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.62   | 0.89              | 0.90   | 1.18   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.23   | 0.30   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.62   | 2.32              | 2.36   | 3.09   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.62   | 2.32              | 2.36   | 3.09   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.65   | 2.36              | 2.40   | 3.15   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.58   | 0.83              | 0.84   | 1.10   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.58   | 0.84              | 0.85   | 1.12   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.56   | 0.80              | 0.81   | 1.07   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.38   | 0.54              | 0.55   | 0.72   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.19   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.24   | 0.34              | 0.35   | 0.46   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.73   | 1.04              | 1.06   | 1.39   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.73   | 1.04              | 1.06   | 1.39   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.67   | 0.96              | 0.98   | 1.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.66   | 0.95              | 0.97   | 1.27   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.23              | 0.24   | 0.32   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.52   | 0.76              | 0.77   | 1.02   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.76              | 0.77   | 1.02   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.47   | 0.68              | 0.70   | 0.91   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.35   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.34              | 0.35   | 0.45   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.82   | 2.60              | 2.64   | 3.46   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.86   | 2.66              | 2.70   | 3.54   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.44              | 0.45   | 0.58   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.27   | 0.38              | 0.39   | 0.51   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.73   | 1.07              | 1.14   | 1.51   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.94   | 1.39              | 1.48   | 1.96   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.94   | 1.39              | 1.48   | 1.96   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.59              | 0.60   | 0.79   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.27   | 1.82              | 1.86   | 2.45   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.24   | 1.78              | 1.82   | 2.40   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.24   | 1.78              | 1.82   | 2.40   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.06   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.02              | 0.03   | 0.03   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |



**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.10   | 0.14              | 0.15   | 0.19   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.26   | 0.34   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.13   | 0.19              | 0.20   | 0.26   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.11   | 0.16              | 0.16   | 0.22   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.13   | 0.19              | 0.19   | 0.25   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.23   | 0.33              | 0.34   | 0.45   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.41   | 0.59              | 0.59   | 0.78   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.41   | 0.59              | 0.59   | 0.78   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.17   | 0.22   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.31   | 0.40   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.24   | 0.34              | 0.34   | 0.45   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.45              | 0.46   | 0.60   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.27   | 0.39              | 0.39   | 0.52   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.66   | 2.44              | 2.62   | 3.49   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.66   | 2.44              | 2.62   | 3.49   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.16   | 0.22   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.14   | 0.21              | 0.23   | 0.32   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.62   | 0.89              | 0.91   | 1.20   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.35   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.51   | 0.74              | 0.78   | 1.03   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.05   | 0.06   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.32   | 0.47              | 0.48   | 0.64   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.19   | 0.27              | 0.28   | 0.37   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.37   | 0.49   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.37   | 0.49   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.16   | 0.21   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.09              | 0.11   | 0.14   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.24   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.24              | 0.24   | 0.32   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.38   | 0.54              | 0.55   | 0.71   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.38   | 0.55              | 0.55   | 0.72   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.10   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.58   | 5.11              | 5.15   | 6.73   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.24   | 0.34              | 0.36   | 0.47   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.24   | 0.34              | 0.36   | 0.47   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.58   | 5.11              | 5.16   | 6.74   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 3.58   | 5.11              | 5.15   | 6.74   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.58   | 5.11              | 5.15   | 6.74   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.58   | 5.11              | 5.15   | 6.74   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.58   | 5.11              | 5.15   | 6.73   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.45              | 0.46   | 0.60   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.43              | 0.44   | 0.58   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.87   | 1.24              | 1.25   | 1.64   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.21   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.31              | 0.32   | 0.42   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.26   | 0.37              | 0.38   | 0.50   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.44              | 0.46   | 0.60   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.57              | 0.58   | 0.76   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.42   | 0.55   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.82   | 1.19              | 1.25   | 1.65   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.01   | 0.01   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.45   | 0.64              | 0.65   | 0.86   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.40   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.87   | 5.55              | 5.65   | 7.41   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 2.16   | 3.10              | 3.16   | 4.14   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.88   | 5.56              | 5.66   | 7.42   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.87   | 5.54              | 5.64   | 7.40   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.87   | 5.55              | 5.65   | 7.41   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.39   | 0.56              | 0.57   | 0.74   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.30   | 0.44              | 0.48   | 0.64   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.12   | 1.62              | 1.69   | 2.23   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.12   | 1.62              | 1.69   | 2.23   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.74   | 2.52              | 2.59   | 3.41   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.63   | 2.36              | 2.43   | 3.20   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.83   | 1.19              | 1.20   | 1.57   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.25              | 1.26   | 1.65   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.25              | 1.26   | 1.65   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.48   | 0.69              | 0.70   | 0.92   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.43   | 0.62              | 0.63   | 0.83   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.43   | 0.62              | 0.63   | 0.83   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.53   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.18   | 0.25              | 0.26   | 0.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.24   | 0.35              | 0.36   | 0.47   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.04              | 0.04   | 0.05   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.23   | 0.33              | 0.34   | 0.45   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.34   | 0.48              | 0.49   | 0.64   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.56   | 0.80              | 0.81   | 1.07   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.20   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.34   | 0.48              | 0.49   | 0.64   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.12   | 0.18              | 0.18   | 0.23   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 3.56   | 5.08              | 5.13   | 6.70   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.46              | 0.48   | 0.63   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.32   | 0.45              | 0.46   | 0.60   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.42   | 0.55   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.56   | 0.80              | 0.80   | 1.05   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.55   | 0.78              | 0.79   | 1.03   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.09   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.39   | 0.56              | 0.58   | 0.76   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.44   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.44   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.80   | 1.15              | 1.16   | 1.52   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.57   | 2.25              | 2.28   | 2.98   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.56   | 2.23              | 2.27   | 2.97   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.57   | 2.25              | 2.28   | 2.98   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.44   | 2.06              | 2.09   | 2.73   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.06   | 1.51              | 1.54   | 2.01   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.22   | 0.32              | 0.32   | 0.42   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.70   | 1.02              | 1.06   | 1.39   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.17              | 0.18   | 0.23   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.37              | 0.38   | 0.49   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.24   | 0.35              | 0.37   | 0.49   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.75   | 1.10              | 1.14   | 1.51   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.75   | 1.09              | 1.13   | 1.50   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.75   | 1.09              | 1.13   | 1.50   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Benzene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.14   | 0.20              | 0.21   | 0.27   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.27   | 0.36   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.31              | 0.32   | 0.42   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |



**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.19   | 0.27              | 0.28   | 0.37   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.17   | 0.25              | 0.25   | 0.33   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.08   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.16   | 0.22              | 0.23   | 0.29   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.16   | 1.65              | 1.67   | 2.19   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.15   | 1.65              | 1.67   | 2.19   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.14   | 1.62              | 1.65   | 2.15   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.10   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-74. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Benzene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.12   | 0.17              | 0.17   | 0.23   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.14   | 0.18   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.22   | 0.32              | 0.33   | 0.43   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.38              | 0.39   | 0.47   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.36   | 1.84              | 1.86   | 2.26   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.04   | 1.34              | 1.34   | 1.62   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.52   | 0.67              | 0.68   | 0.82   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.44   | 0.55              | 0.55   | 0.66   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.54   | 0.68              | 0.69   | 0.82   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.54   | 0.68              | 0.69   | 0.82   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.14   | 0.21              | 0.22   | 0.27   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.20   | 0.26              | 0.26   | 0.32   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.54   | 3.35              | 3.38   | 4.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.24              | 0.24   | 0.29   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.60              | 0.60   | 0.72   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.73   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 5.40   | 6.84              | 6.87   | 8.23   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.89   | 6.16              | 6.19   | 7.41   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.40   | 6.84              | 6.87   | 8.24   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.52              | 0.52   | 0.63   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.35   | 2.94              | 2.95   | 3.52   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.31   | 2.89              | 2.90   | 3.47   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.35   | 2.94              | 2.95   | 3.52   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.86   | 1.18              | 1.19   | 1.46   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.86   | 1.18              | 1.19   | 1.46   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.66   | 0.95              | 0.98   | 1.21   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.25   | 0.32              | 0.32   | 0.38   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.21              | 0.21   | 0.27   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.11   | 0.14   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.03   | 1.31              | 1.32   | 1.58   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.03   | 1.31              | 1.32   | 1.58   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.03   | 1.31              | 1.32   | 1.58   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.28   | 0.38              | 0.39   | 0.47   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.60   | 0.76              | 0.77   | 0.92   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.35   | 5.50              | 5.52   | 6.61   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.59   | 0.74              | 0.74   | 0.88   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.22              | 0.23   | 0.30   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.84   | 1.08              | 1.09   | 1.31   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.99   | 1.23              | 1.23   | 1.47   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.07   | 2.61              | 2.62   | 3.14   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.01   | 2.53              | 2.54   | 3.04   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.49   | 0.63              | 0.63   | 0.76   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 5.24   | 6.60              | 6.63   | 7.93   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.24   | 6.60              | 6.63   | 7.93   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.34   | 6.72              | 6.75   | 8.08   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.86   | 2.35              | 2.36   | 2.83   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.88   | 2.38              | 2.39   | 2.86   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.80   | 2.27              | 2.28   | 2.73   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.23   | 1.53              | 1.54   | 1.84   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.39              | 0.40   | 0.48   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.21   | 0.26              | 0.26   | 0.32   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.76   | 0.97              | 0.98   | 1.17   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.35   | 2.97              | 2.98   | 3.57   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.35   | 2.96              | 2.98   | 3.56   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.16   | 2.73              | 2.74   | 3.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 2.14   | 2.70              | 2.71   | 3.25   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.50   | 0.68              | 0.69   | 0.84   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.70   | 2.16              | 2.17   | 2.61   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.70   | 2.16              | 2.17   | 2.61   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.53   | 1.94              | 1.95   | 2.34   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.57   | 0.73              | 0.74   | 0.88   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 0.97              | 0.97   | 1.17   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 5.89   | 7.39              | 7.41   | 8.86   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 6.02   | 7.55              | 7.58   | 9.06   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.99   | 1.24              | 1.25   | 1.49   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.86   | 1.08              | 1.08   | 1.30   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.33   | 3.17              | 3.21   | 3.91   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.04   | 4.12              | 4.18   | 5.09   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.04   | 4.12              | 4.18   | 5.09   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.23   | 1.57              | 1.58   | 1.90   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.41   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.09   | 5.21              | 5.23   | 6.28   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.01   | 5.10              | 5.12   | 6.15   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 4.01   | 5.10              | 5.12   | 6.15   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.12              | 0.13   | 0.17   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.07              | 0.07   | 0.08   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.46              | 0.46   | 0.55   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.19   | 0.24              | 0.24   | 0.29   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |



**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.24   | 0.31              | 0.31   | 0.37   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.32   | 0.41              | 0.42   | 0.50   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.56   | 0.72              | 0.73   | 0.87   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.41   | 0.55              | 0.56   | 0.68   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.37   | 0.46              | 0.46   | 0.55   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.42   | 0.53              | 0.53   | 0.63   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.75   | 0.95              | 0.96   | 1.15   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.32   | 1.66              | 1.67   | 1.99   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.32   | 1.66              | 1.66   | 1.99   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.35   | 0.47              | 0.48   | 0.58   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.97   | 1.23              | 1.23   | 1.48   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.67   | 0.86              | 0.86   | 1.04   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.76   | 0.96              | 0.96   | 1.15   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.72   | 0.90              | 0.90   | 1.08   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.01   | 1.28              | 1.28   | 1.53   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.88   | 1.11              | 1.11   | 1.32   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 5.32   | 7.31              | 7.41   | 9.06   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.32   | 7.30              | 7.41   | 9.05   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.29   | 0.45              | 0.47   | 0.59   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.44   | 0.65              | 0.67   | 0.83   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.01   | 2.55              | 2.56   | 3.06   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.55   | 1.95              | 1.96   | 2.35   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.38   | 0.48              | 0.48   | 0.57   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.24   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.16              | 0.16   | 0.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.57   | 0.74              | 0.74   | 0.89   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.64   | 2.18              | 2.20   | 2.67   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.04   | 1.35              | 1.36   | 1.64   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.78              | 0.79   | 0.95   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.81   | 1.05              | 1.05   | 1.27   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.81   | 1.05              | 1.05   | 1.27   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.18   | 0.23              | 0.24   | 0.28   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.09   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.21   | 0.27              | 0.27   | 0.32   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.43              | 0.44   | 0.54   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.19   | 0.28              | 0.28   | 0.35   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.40   | 0.50              | 0.50   | 0.60   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.40   | 0.50              | 0.50   | 0.60   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.40   | 0.50              | 0.50   | 0.60   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.40   | 0.50              | 0.50   | 0.60   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.28   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.68              | 0.69   | 0.83   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.23   | 1.53              | 1.53   | 1.83   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.24   | 1.55              | 1.55   | 1.85   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.11   | 0.14   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.22   | 0.26   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 11.62  | 14.43             | 14.46  | 17.25  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.76   | 0.97              | 0.98   | 1.18   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.76   | 0.97              | 0.98   | 1.18   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 11.63  | 14.45             | 14.47  | 17.26  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 11.63  | 14.44             | 14.47  | 17.26  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 11.63  | 14.44             | 14.47  | 17.26  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 11.63  | 14.44             | 14.47  | 17.26  |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.62  | 14.43             | 14.46  | 17.25  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.01   | 1.28              | 1.29   | 1.55   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.98   | 1.24              | 1.25   | 1.50   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.28   | 0.38              | 0.38   | 0.46   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.33   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.27              | 0.28   | 0.33   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 2.81   | 3.51              | 3.51   | 4.20   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.35   | 0.45              | 0.45   | 0.54   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.34   | 0.44              | 0.44   | 0.53   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.71   | 0.89              | 0.90   | 1.07   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.83   | 1.07              | 1.07   | 1.29   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.00   | 1.28              | 1.29   | 1.55   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.30   | 1.62              | 1.63   | 1.94   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.93   | 1.17              | 1.17   | 1.40   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.65   | 3.49              | 3.52   | 4.26   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.24   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.24   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.46   | 1.83              | 1.83   | 2.19   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.68   | 0.85              | 0.85   | 1.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.45   | 0.58              | 0.58   | 0.70   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.52  | 15.79             | 15.85  | 18.98  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 6.99   | 8.84              | 8.87   | 10.63  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 12.56  | 15.82             | 15.88  | 19.01  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 12.52  | 15.78             | 15.84  | 18.96  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.52  | 15.79             | 15.85  | 18.98  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.26   | 1.59              | 1.59   | 1.90   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.94   | 1.34              | 1.36   | 1.68   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.60   | 4.71              | 4.75   | 5.74   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.60   | 4.71              | 4.75   | 5.74   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.63   | 7.25              | 7.30   | 8.78   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.28   | 6.80              | 6.85   | 8.25   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 2.69   | 3.35              | 3.36   | 4.01   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.82   | 3.52              | 3.53   | 4.21   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.82   | 3.52              | 3.53   | 4.21   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.41              | 0.41   | 0.49   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.55   | 1.96              | 1.97   | 2.36   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.55   | 1.96              | 1.97   | 2.36   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.40   | 1.77              | 1.78   | 2.13   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.40   | 1.77              | 1.78   | 2.13   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.04   | 0.04   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.91   | 1.13              | 1.14   | 1.36   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.57   | 0.72              | 0.72   | 0.86   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.78   | 1.00              | 1.00   | 1.21   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.75   | 0.95              | 0.96   | 1.15   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.45   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.09   | 1.37              | 1.38   | 1.65   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.82   | 2.28              | 2.29   | 2.73   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.34   | 0.43              | 0.43   | 0.51   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.26   | 0.33              | 0.33   | 0.39   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.09   | 1.38              | 1.38   | 1.65   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.34   | 0.41              | 0.42   | 0.50   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.34   | 0.41              | 0.42   | 0.50   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.39   | 0.48              | 0.49   | 0.58   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 11.57  | 14.37             | 14.40  | 17.18  |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.04   | 1.33              | 1.34   | 1.61   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.24   | 0.30              | 0.30   | 0.36   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.01   | 1.25              | 1.25   | 1.49   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.94   | 1.17              | 1.17   | 1.39   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.81   | 2.25              | 2.25   | 2.68   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.81   | 2.25              | 2.25   | 2.68   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.78   | 2.21              | 2.22   | 2.64   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.20   | 0.25              | 0.26   | 0.31   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.22   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.26   | 1.61              | 1.62   | 1.94   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.74   | 0.93              | 0.93   | 1.12   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.74   | 0.93              | 0.93   | 1.12   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.65   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.59   | 3.25              | 3.26   | 3.89   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.60   | 3.25              | 3.26   | 3.90   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.60   | 3.25              | 3.26   | 3.90   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.08   | 6.37              | 6.39   | 7.64   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 5.06   | 6.34              | 6.36   | 7.60   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.08   | 6.37              | 6.39   | 7.64   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.65   | 5.84              | 5.85   | 7.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 3.43   | 4.31              | 4.32   | 5.17   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.43   | 4.31              | 4.32   | 5.17   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 3.43   | 4.31              | 4.32   | 5.17   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.43   | 4.31              | 4.32   | 5.17   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.43   | 4.31              | 4.32   | 5.17   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.72   | 0.90              | 0.90   | 1.08   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.27   | 2.95              | 2.97   | 3.58   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.37   | 0.49              | 0.49   | 0.59   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.16   |

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.39   | 0.50              | 0.50   | 0.60   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.23   | 0.30              | 0.30   | 0.37   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.24   | 0.31              | 0.31   | 0.38   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.83   | 1.05              | 1.06   | 1.27   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.17   | 0.20   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.76   | 1.01              | 1.03   | 1.25   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2.43   | 3.19              | 3.22   | 3.89   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.41   | 3.17              | 3.20   | 3.86   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.41   | 3.17              | 3.20   | 3.86   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.18   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.37              | 0.37   | 0.45   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.45   | 0.58              | 0.59   | 0.71   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.20   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.59   | 0.76              | 0.77   | 0.93   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.69   | 0.89              | 0.90   | 1.08   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.45   |



**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.34   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.61   | 0.79              | 0.80   | 0.96   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.56   | 0.70              | 0.70   | 0.83   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.20   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.75   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.74   | 4.68              | 4.69   | 5.61   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.74   | 4.67              | 4.68   | 5.60   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.68   | 4.60              | 4.61   | 5.51   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.25   | 0.32              | 0.32   | 0.39   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.20   | 0.27              | 0.27   | 0.33   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.20   | 0.27              | 0.27   | 0.33   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-75. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Benzene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.29   | 0.36              | 0.36   | 0.44   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.38   | 0.48              | 0.49   | 0.58   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.30   | 0.38              | 0.38   | 0.46   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.72   | 0.91              | 0.91   | 1.09   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.17              | 0.17   | 0.21   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.41   | 0.55              | 0.55   | 0.66   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.96   | 2.60              | 2.61   | 3.13   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.51   | 1.89              | 1.89   | 2.25   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.75   | 0.96              | 0.96   | 1.14   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.26   | 0.32              | 0.32   | 0.38   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.64   | 0.78              | 0.78   | 0.92   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.79   | 0.97              | 0.97   | 1.14   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.79   | 0.97              | 0.97   | 1.14   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.15   | 0.19              | 0.18   | 0.22   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.19   | 0.29              | 0.29   | 0.36   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.66   | 4.75              | 4.75   | 5.67   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.40   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.14   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.70   | 0.85              | 0.85   | 1.01   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.70   | 0.86              | 0.86   | 1.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 7.81   | 9.69              | 9.69   | 11.46  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.08   | 8.74              | 8.73   | 10.31  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.82   | 9.70              | 9.70   | 11.47  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.59   | 0.74              | 0.74   | 0.88   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 3.40   | 4.16              | 4.16   | 4.90   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 3.35   | 4.10              | 4.10   | 4.83   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.40   | 4.16              | 4.16   | 4.90   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.23   | 1.67              | 1.67   | 2.01   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.23   | 1.67              | 1.67   | 2.01   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.94   | 1.35              | 1.36   | 1.66   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.36   | 0.45              | 0.45   | 0.53   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.29              | 0.29   | 0.36   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.14              | 0.14   | 0.19   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.49   | 1.86              | 1.86   | 2.20   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.49   | 1.86              | 1.86   | 2.20   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.49   | 1.86              | 1.86   | 2.20   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.55              | 0.55   | 0.66   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.88   | 1.10              | 1.10   | 1.30   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 6.31   | 7.80              | 7.80   | 9.21   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.86   | 1.05              | 1.05   | 1.23   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.31              | 0.31   | 0.40   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.21   | 1.53              | 1.53   | 1.81   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.42   | 0.53              | 0.53   | 0.62   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.42   | 0.53              | 0.53   | 0.62   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.42   | 0.53              | 0.53   | 0.62   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.43   | 1.74              | 1.74   | 2.05   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.01   | 3.71              | 3.71   | 4.38   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.92   | 3.60              | 3.60   | 4.25   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.71   | 0.89              | 0.89   | 1.06   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 7.59   | 9.36              | 9.36   | 11.05  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.59   | 9.36              | 9.36   | 11.05  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.74   | 9.54              | 9.53   | 11.26  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.70   | 3.34              | 3.34   | 3.94   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.73   | 3.37              | 3.37   | 3.98   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.61   | 3.22              | 3.22   | 3.80   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.78   | 2.18              | 2.18   | 2.56   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.41   | 0.55              | 0.55   | 0.67   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.11   | 1.38              | 1.38   | 1.63   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.41   | 4.21              | 4.21   | 4.97   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.40   | 4.20              | 4.20   | 4.96   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.13   | 3.87              | 3.86   | 4.56   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.10   | 3.83              | 3.83   | 4.53   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.72   | 0.97              | 0.97   | 1.16   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.46   | 3.07              | 3.07   | 3.63   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.46   | 3.07              | 3.07   | 3.63   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.21   | 2.75              | 2.75   | 3.26   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 1.00              | 1.00   | 1.19   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.10   | 1.37              | 1.37   | 1.62   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 8.53   | 10.47             | 10.47  | 12.35  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 8.72   | 10.71             | 10.70  | 12.62  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.44   | 1.76              | 1.76   | 2.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.25   | 1.53              | 1.53   | 1.81   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.36   | 4.50              | 4.50   | 5.41   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.37   | 5.85              | 5.86   | 7.04   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.37   | 5.85              | 5.86   | 7.04   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.52   | 1.90              | 1.90   | 2.25   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.60              | 0.60   | 0.71   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 5.92   | 7.38              | 7.38   | 8.73   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.80   | 7.23              | 7.22   | 8.55   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.80   | 7.23              | 7.22   | 8.55   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.17   | 0.23              | 0.23   | 0.28   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.18              | 0.18   | 0.23   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.63              | 0.63   | 0.75   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.28   | 0.34              | 0.34   | 0.40   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |



**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.52   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.47   | 0.60              | 0.60   | 0.71   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.81   | 1.02              | 1.02   | 1.22   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.20              | 0.20   | 0.24   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.59   | 0.79              | 0.79   | 0.94   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.53   | 0.65              | 0.65   | 0.77   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.87   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.09   | 1.35              | 1.35   | 1.60   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 1.92   | 2.35              | 2.35   | 2.77   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 1.92   | 2.35              | 2.35   | 2.77   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.50   | 0.67              | 0.67   | 0.81   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.40   | 1.74              | 1.74   | 2.06   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.97   | 1.22              | 1.22   | 1.44   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.17              | 0.17   | 0.20   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.11   | 1.36              | 1.36   | 1.60   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.04   | 1.27              | 1.27   | 1.50   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.47   | 1.81              | 1.81   | 2.14   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.28   | 1.57              | 1.57   | 1.85   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 7.66   | 10.36             | 10.38  | 12.51  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.65   | 10.36             | 10.38  | 12.50  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.41   | 0.65              | 0.65   | 0.80   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.62   | 0.92              | 0.92   | 1.13   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.91   | 3.61              | 3.61   | 4.26   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 2.24   | 2.77              | 2.77   | 3.27   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.77   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.22   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.35   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.22   | 0.28              | 0.28   | 0.33   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.18   | 0.23              | 0.23   | 0.27   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.13   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.83   | 1.04              | 1.04   | 1.24   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.36   | 3.09              | 3.09   | 3.69   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.16   | 0.20              | 0.20   | 0.23   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.18   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.18   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.50   | 1.91              | 1.91   | 2.27   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.89   | 1.11              | 1.11   | 1.32   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.18   | 1.48              | 1.48   | 1.76   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.18   | 1.48              | 1.48   | 1.76   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.26   | 0.33              | 0.33   | 0.39   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.42   | 0.59              | 0.59   | 0.71   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.37              | 0.37   | 0.45   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.59   | 0.71              | 0.71   | 0.84   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.77   | 0.97              | 0.97   | 1.15   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.78   | 2.17              | 2.17   | 2.56   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.80   | 2.19              | 2.19   | 2.58   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.14              | 0.15   | 0.19   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.23              | 0.23   | 0.27   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.22   | 0.30              | 0.30   | 0.36   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.17   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.89  | 20.51             | 20.50  | 24.11  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.07   | 1.35              | 1.35   | 1.61   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.07   | 1.35              | 1.35   | 1.61   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 16.91  | 20.53             | 20.51  | 24.14  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 16.90  | 20.53             | 20.51  | 24.13  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.90  | 20.53             | 20.51  | 24.13  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 16.90  | 20.53             | 20.51  | 24.13  |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.89  | 20.51             | 20.50  | 24.11  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.46   | 1.82              | 1.82   | 2.15   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.42   | 1.76              | 1.76   | 2.08   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.52              | 0.52   | 0.62   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.30   | 0.39              | 0.39   | 0.46   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.39              | 0.39   | 0.46   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.07   | 4.97              | 4.96   | 5.84   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.50   | 0.62              | 0.62   | 0.74   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.49   | 0.62              | 0.62   | 0.73   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.18   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.02   | 1.26              | 1.26   | 1.49   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.21   | 1.51              | 1.51   | 1.79   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.44   | 1.82              | 1.82   | 2.16   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.88   | 2.30              | 2.30   | 2.71   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.35   | 1.66              | 1.66   | 1.95   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.82   | 4.95              | 4.95   | 5.91   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.17   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.30   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.21   | 0.28              | 0.28   | 0.33   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.22   | 0.28              | 0.28   | 0.34   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.11   | 2.59              | 2.59   | 3.06   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.98   | 1.21              | 1.21   | 1.42   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.66   | 0.82              | 0.82   | 0.98   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.15  | 22.40             | 22.39  | 26.43  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 10.14  | 12.55             | 12.54  | 14.82  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 18.20  | 22.44             | 22.43  | 26.48  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 18.16  | 22.39             | 22.38  | 26.42  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.15  | 22.40             | 22.39  | 26.43  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.84   | 2.25              | 2.25   | 2.66   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.23   | 0.29              | 0.29   | 0.35   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.35   | 1.90              | 1.90   | 2.31   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.20   | 6.68              | 6.69   | 7.97   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.20   | 6.68              | 6.69   | 7.97   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 8.15   | 10.28             | 10.28  | 12.21  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.64   | 9.66              | 9.66   | 11.47  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 3.89   | 4.74              | 4.74   | 5.58   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.09   | 4.99              | 4.98   | 5.87   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.09   | 4.98              | 4.98   | 5.86   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.48   | 0.59              | 0.59   | 0.69   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.28   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 2.25   | 2.78              | 2.78   | 3.29   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.25   | 2.78              | 2.78   | 3.29   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.03   | 2.51              | 2.51   | 2.96   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.03   | 2.51              | 2.51   | 2.96   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.32   | 1.62              | 1.61   | 1.90   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.83   | 1.01              | 1.01   | 1.19   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.13   | 1.42              | 1.42   | 1.68   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.09   | 1.35              | 1.35   | 1.60   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.63   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.57   | 1.94              | 1.94   | 2.29   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.63   | 3.23              | 3.23   | 3.81   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.36   | 0.45              | 0.45   | 0.54   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.10   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 1.59   | 1.95              | 1.95   | 2.30   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.55   | 0.67              | 0.67   | 0.78   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 16.82  | 20.43             | 20.41  | 24.02  |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.50   | 1.88              | 1.88   | 2.23   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.50   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.20   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.42   | 1.72              | 1.72   | 2.02   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.37   | 1.66              | 1.65   | 1.94   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.63   | 3.19              | 3.19   | 3.75   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 2.63   | 3.19              | 3.19   | 3.75   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.60   | 3.15              | 3.15   | 3.70   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.18   | 0.24              | 0.24   | 0.29   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.83   | 2.29              | 2.29   | 2.70   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.07   | 1.32              | 1.32   | 1.56   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.07   | 1.32              | 1.32   | 1.56   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.58   | 0.71              | 0.71   | 0.83   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 3.76   | 4.61              | 4.60   | 5.43   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.77   | 4.61              | 4.61   | 5.43   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.76   | 4.61              | 4.61   | 5.43   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.38   | 9.04              | 9.04   | 10.66  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 7.34   | 9.00              | 8.99   | 10.60  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.38   | 9.04              | 9.04   | 10.66  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 6.75   | 8.28              | 8.27   | 9.76   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 4.99   | 6.13              | 6.13   | 7.23   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.99   | 6.13              | 6.13   | 7.23   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 4.99   | 6.13              | 6.13   | 7.23   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.99   | 6.13              | 6.13   | 7.23   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.99   | 6.13              | 6.13   | 7.23   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.04   | 1.28              | 1.28   | 1.51   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 3.28   | 4.17              | 4.18   | 4.96   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.53   | 0.68              | 0.68   | 0.81   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.33   | 0.42              | 0.42   | 0.50   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.43              | 0.43   | 0.52   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.21   | 1.49              | 1.49   | 1.76   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.15              | 0.15   | 0.19   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 1.07   | 1.41              | 1.41   | 1.69   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.51   | 4.52              | 4.52   | 5.39   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 3.49   | 4.49              | 4.49   | 5.36   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.49   | 4.49              | 4.49   | 5.36   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.21              | 0.21   | 0.25   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.41   | 0.51              | 0.51   | 0.60   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.65   | 0.82              | 0.82   | 0.98   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.23   | 0.27   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.86   | 1.09              | 1.09   | 1.29   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.00   | 1.26              | 1.26   | 1.50   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.63   |



**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Benzene 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.32   | 0.40              | 0.40   | 0.48   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.88   | 1.12              | 1.12   | 1.33   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.81   | 0.99              | 0.98   | 1.16   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.23   | 0.27   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.73   | 0.89              | 0.89   | 1.05   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 5.43   | 6.64              | 6.63   | 7.81   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.42   | 6.62              | 6.62   | 7.80   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.33   | 6.52              | 6.51   | 7.68   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.36   | 0.45              | 0.45   | 0.53   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.19   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.15   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.29   | 0.38              | 0.38   | 0.45   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.29   | 0.38              | 0.38   | 0.45   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-76. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Benzene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.27   | 0.34              | 0.34   | 0.40   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.18              | 0.18   | 0.21   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.55   | 0.69              | 0.69   | 0.81   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.43   | 0.54              | 0.54   | 0.63   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.04   | 1.29              | 1.29   | 1.52   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.30   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.19   | 0.24              | 0.24   | 0.29   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-77. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.15              | 0.14   | 0.20   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.18   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.15              | 0.14   | 0.20   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.09   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.10   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.12              | 0.12   | 0.16   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.23   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.04   | 0.06   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.05              | 0.04   | 0.06   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.12   | 0.16              | 0.16   | 0.22   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.16              | 0.16   | 0.23   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.19   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.18   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |



**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.00   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.29   | 0.44              | 0.51   | 0.70   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.29   | 0.44              | 0.51   | 0.70   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.25   | 0.33              | 0.33   | 0.46   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.14   | 0.19              | 0.19   | 0.26   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.26   | 0.34              | 0.34   | 0.47   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.26   | 0.34              | 0.34   | 0.47   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.10               | 0.10   | 0.13   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.11   | 0.15               | 0.15   | 0.21   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.11   | 0.14               | 0.14   | 0.20   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.07               | 0.07   | 0.10   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08               | 0.08   | 0.11   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.08               | 0.08   | 0.11   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01               | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.03   | 0.04               | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04               | 0.04   | 0.06   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04               | 0.04   | 0.05   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04               | 0.04   | 0.05   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02               | 0.02   | 0.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.02               | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.33              | 0.33   | 0.46   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.10   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.19   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.18   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.13   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.04   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.14   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.04   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-78. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.42   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.14   | 0.17              | 0.17   | 0.20   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.19              | 0.20   | 0.25   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.19              | 0.20   | 0.25   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.26   | 0.32              | 0.32   | 0.37   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.45              | 0.45   | 0.54   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.35   | 0.45              | 0.45   | 0.54   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.36   | 0.46              | 0.46   | 0.55   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.36   | 0.43              | 0.43   | 0.51   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.37   | 0.44              | 0.44   | 0.52   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.28   | 0.37              | 0.37   | 0.44   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.28   | 0.36              | 0.36   | 0.44   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.28   | 0.36              | 0.36   | 0.44   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.07   | 0.08   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |



**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.87   | 1.39              | 1.43   | 1.80   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.87   | 1.39              | 1.43   | 1.80   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.17   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.09   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.74   | 0.91              | 0.90   | 1.07   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.74   | 0.91              | 0.90   | 1.07   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.22   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.76   | 0.92              | 0.91   | 1.08   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.60   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.76   | 0.92              | 0.92   | 1.08   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.76   | 0.92              | 0.91   | 1.08   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.76   | 0.92              | 0.91   | 1.08   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.02   | 0.03   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.74   | 0.90              | 0.90   | 1.07   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.30   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.16   | 0.19   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.19   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.14   | 0.16              | 0.16   | 0.19   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.00   | 0.01   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |



**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.08              | 0.08   | 0.10   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Table A-79. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.04   | 0.05   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.63   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.43   | 0.50              | 0.50   | 0.58   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.47   | 0.55              | 0.55   | 0.63   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.20   | 0.24              | 0.24   | 0.28   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.28              | 0.28   | 0.34   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.28              | 0.28   | 0.34   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.12   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.44              | 0.44   | 0.51   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.25   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.21              | 0.21   | 0.24   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.74   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.74   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.75   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.16   | 0.18              | 0.18   | 0.21   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.21   | 0.24              | 0.24   | 0.28   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.28   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.25   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.15   | 0.17              | 0.17   | 0.20   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.15   | 0.17              | 0.17   | 0.20   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.52   | 0.61              | 0.61   | 0.70   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.62              | 0.62   | 0.72   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.10   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.21              | 0.20   | 0.24   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.25   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.14              | 0.14   | 0.17   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.41   | 0.52              | 0.51   | 0.61   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.40   | 0.51              | 0.51   | 0.60   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.40   | 0.51              | 0.51   | 0.60   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.12   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |



**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.06   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.12   | 0.14              | 0.14   | 0.16   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.24   | 1.98              | 1.99   | 2.47   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.24   | 1.98              | 1.99   | 2.47   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.24   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.18   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.18   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.11              | 0.11   | 0.14   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.10              | 0.10   | 0.13   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.09              | 0.09   | 0.11   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.09   | 0.12              | 0.12   | 0.14   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.07   | 1.27              | 1.27   | 1.48   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.07   | 1.27              | 1.27   | 1.48   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.07              | 0.07   | 0.08   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.25   | 0.29              | 0.29   | 0.34   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.26              | 0.26   | 0.30   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.01   | 0.02              | 0.01   | 0.02   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.15              | 0.15   | 0.17   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.09   | 1.28              | 1.28   | 1.49   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.61   | 0.71              | 0.71   | 0.83   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.10   | 1.29              | 1.28   | 1.49   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.10   | 1.28              | 1.28   | 1.49   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.09   | 1.28              | 1.28   | 1.49   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.37              | 0.36   | 0.43   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                    |        |        |
|---|-------------------------------------|--|---|--|--------|--------------------|--------|--------|
|   |                                     |  |   | Alt. 1 – No Action   | Alt. 2 | Alt. 3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.30   | 0.37               | 0.36   | 0.43   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.49   | 0.58               | 0.58   | 0.67   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.45   | 0.54               | 0.54   | 0.63   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.24   | 0.28               | 0.28   | 0.32   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.29               | 0.29   | 0.34   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.25   | 0.29               | 0.29   | 0.34   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.01               | 0.01   | 0.01   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03               | 0.03   | 0.04   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01               | 0.01   | 0.02   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.13   | 0.16               | 0.16   | 0.18   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.13   | 0.16               | 0.16   | 0.18   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14               | 0.14   | 0.17   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.12   | 0.14               | 0.14   | 0.17   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00               | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.08   | 0.09               | 0.09   | 0.11   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.05   | 0.06               | 0.06   | 0.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.03   | 0.04   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.10   | 0.11              | 0.11   | 0.13   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.07   | 1.26              | 1.26   | 1.47   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.11   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.16   | 0.19              | 0.19   | 0.22   |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.31   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.45   | 0.53              | 0.53   | 0.62   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.41   | 0.49              | 0.49   | 0.57   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.41   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.09              | 0.08   | 0.10   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.20   | 0.23              | 0.23   | 0.27   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts**

**1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.12   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |



**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.45   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.33   | 0.39              | 0.39   | 0.45   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.33   | 0.38              | 0.38   | 0.44   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.11              | 0.11   | 0.14   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-80. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
1,3-Butadiene 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.03   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.39   | 0.53              | 0.56   | 0.68   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.15   |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.15   |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.60   | 2.19              | 2.31   | 2.81   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.60   | 2.19              | 2.31   | 2.81   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.89   | 1.21              | 1.28   | 1.56   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.42              | 0.44   | 0.53   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.41              | 0.44   | 0.53   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.03   | 0.03   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.08   | 0.10              | 0.10   | 0.13   |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.24   | 0.29   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.24   | 0.29   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.24   | 0.29   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.24   | 0.29   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.64   | 0.85              | 0.90   | 1.10   |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.64   | 0.85              | 0.90   | 1.10   |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.64   | 0.86              | 0.90   | 1.11   |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.06   |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.05   |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.11   | 0.13              | 0.13   | 0.17   |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.18   |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.25   | 0.33              | 0.35   | 0.43   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.35              | 0.37   | 0.46   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.26   | 0.35              | 0.37   | 0.46   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.08   | 0.09   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.20   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.19   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.19   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.38   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.08   | 0.10   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 1.67   | 2.27              | 2.40   | 2.93   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.67   | 2.27              | 2.40   | 2.93   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.17   | 0.23              | 0.25   | 0.30   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.17   | 0.24              | 0.25   | 0.30   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.39   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.22   | 0.30              | 0.32   | 0.39   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.30   | 0.41              | 0.44   | 0.53   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.33   | 0.45              | 0.48   | 0.58   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.56   | 0.77              | 0.81   | 0.99   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.23   | 1.65              | 1.73   | 2.13   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.04   | 1.42              | 1.50   | 1.82   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 1.04   | 1.42              | 1.50   | 1.82   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.23   | 1.65              | 1.73   | 2.13   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 1.23   | 1.65              | 1.73   | 2.13   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.23   | 1.65              | 1.73   | 2.13   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 1.23   | 1.65              | 1.73   | 2.13   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.23   | 1.65              | 1.73   | 2.13   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.31   | 0.42              | 0.44   | 0.54   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.28   | 0.38              | 0.40   | 0.49   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.19   | 0.26              | 0.28   | 0.34   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.21   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.16              | 0.17   | 0.21   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.39   | 0.53              | 0.56   | 0.68   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.38   | 0.49              | 0.50   | 0.64   |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.26   | 0.33              | 0.34   | 0.43   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.38   | 0.49              | 0.50   | 0.64   |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.38   | 0.49              | 0.50   | 0.64   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.38   | 0.49              | 0.50   | 0.64   |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.30   | 0.41              | 0.43   | 0.52   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.02   | 1.39              | 1.46   | 1.78   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.02   | 1.39              | 1.46   | 1.78   |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 1.05   | 1.43              | 1.50   | 1.84   |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.05   | 1.42              | 1.50   | 1.83   |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 1.23   | 1.64              | 1.72   | 2.13   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.13   | 0.18              | 0.19   | 0.23   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.20   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.14   | 0.19              | 0.20   | 0.25   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.21   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.07   |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.28   | 1.74              | 1.84   | 2.25   |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.28   | 1.74              | 1.84   | 2.25   |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.28   | 1.74              | 1.84   | 2.25   |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.28   | 1.74              | 1.83   | 2.24   |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.13   | 0.16   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.50   | 0.69              | 0.73   | 0.88   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.32   | 0.43              | 0.45   | 0.55   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.32   | 0.43              | 0.45   | 0.55   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.32   | 0.43              | 0.45   | 0.55   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.43              | 0.45   | 0.55   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |



**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 1.03   | 1.41              | 1.49   | 1.82   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.02   | 0.02   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.10   | 0.12   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.19   | 0.26              | 0.28   | 0.34   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.19   | 0.26              | 0.28   | 0.34   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-81. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.60  | -0.75             | -0.72  | -0.86  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.63  | -3.16             | -2.95  | -3.42  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.48  | -3.06             | -2.98  | -3.55  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.21  | -1.49             | -1.45  | -1.72  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.43  | -0.53             | -0.52  | -0.62  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.15             | -0.14  | -0.16  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.14             | -0.13  | -0.14  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.08  | -1.33             | -1.29  | -1.54  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.34  | -1.66             | -1.61  | -1.92  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.34  | -1.66             | -1.61  | -1.92  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.26  | -0.32             | -0.31  | -0.37  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.25  | -0.31             | -0.30  | -0.36  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.29  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.13  | -0.16             | -0.15  | -0.18  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.49  | -0.61             | -0.59  | -0.70  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.35   | 8.81              | 12.61  | 18.53  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.10              | 0.13   | 0.18   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.39  | -0.48             | -0.47  | -0.56  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.15             | -0.15  | -0.18  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.11  | -1.35             | -1.28  | -1.50  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.20  | -1.49             | -1.44  | -1.72  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.05  | -0.07  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -13.09 | -16.18            | -15.73 | -18.75 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -11.94 | -14.77            | -14.35 | -17.10 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -13.10 | -16.20            | -15.74 | -18.76 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.10  | -0.13             | -0.13  | -0.15  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.09   | 0.47              | 0.89   | 1.43   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -5.82  | -7.19             | -6.99  | -8.33  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -5.73  | -7.08             | -6.88  | -8.20  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.82  | -7.19             | -6.99  | -8.33  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 43.59  | 69.38             | 85.75  | 117.98 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.59  | 69.38             | 85.75  | 117.98 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 24.02  | 38.30             | 47.39  | 65.24  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.59  | -0.73             | -0.71  | -0.84  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.48   | 13.44             | 16.55  | 22.73  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 8.64   | 13.64             | 16.75  | 22.97  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.36  | -2.89             | -2.77  | -3.27  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.37  | -2.90             | -2.77  | -3.27  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -2.37  | -2.90             | -2.77  | -3.27  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.60  | -0.75             | -0.72  | -0.86  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.16  | -1.35             | -1.20  | -1.34  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -10.33 | -12.68            | -12.22 | -14.47 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -1.50  | -1.85             | -1.80  | -2.14  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.78   | 7.54              | 9.26   | 12.70  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -1.98  | -2.45             | -2.38  | -2.84  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.12  | -0.15             | -0.14  | -0.17  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.83   | 6.30              | 7.97   | 11.09  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.83   | 6.30              | 7.97   | 11.09  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 3.83   | 6.30              | 7.97   | 11.09  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.11  | -0.14             | -0.13  | -0.16  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.42  | -0.52             | -0.51  | -0.60  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.71  | -0.88             | -0.85  | -1.02  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.71  | -0.88             | -0.85  | -1.02  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.71  | -0.88             | -0.85  | -1.02  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -2.45  | -3.03             | -2.95  | -3.51  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -5.07  | -6.27             | -6.09  | -7.26  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.91  | -6.07             | -5.90  | -7.03  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.91  | -1.04             | -0.90  | -0.99  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.78   | 8.77              | 14.83  | 23.10  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 2.78   | 8.77              | 14.83  | 23.10  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.54   | 8.47              | 14.53  | 22.75  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.38  | -0.47             | -0.46  | -0.55  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.17  | -0.20             | -0.20  | -0.24  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.38  | -0.47             | -0.46  | -0.55  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.38  | -0.46             | -0.45  | -0.54  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.51  | -5.57             | -5.40  | -6.42  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.56  | -5.63             | -5.46  | -6.49  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.36  | -5.38             | -5.21  | -6.20  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -2.94  | -3.60             | -3.45  | -4.07  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.59  | -0.73             | -0.71  | -0.85  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.51  | -0.63             | -0.61  | -0.73  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.83  | -2.26             | -2.20  | -2.62  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -5.74  | -7.10             | -6.90  | -8.22  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -5.74  | -7.09             | -6.89  | -8.22  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.28  | -6.53             | -6.35  | -7.57  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -5.23  | -6.47             | -6.28  | -7.49  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.11  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.98  | -1.19             | -1.13  | -1.32  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.07  | -5.03             | -4.89  | -5.83  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.07  | -5.03             | -4.89  | -5.83  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -3.67  | -4.54             | -4.41  | -5.26  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.17             | -0.16  | -0.19  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.41  | -1.74             | -1.69  | -2.01  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.82  | -2.25             | -2.19  | -2.61  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -14.36 | -17.70            | -17.13 | -20.36 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -14.66 | -18.06            | -17.49 | -20.79 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.45  | -3.03             | -2.95  | -3.51  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -2.12  | -2.63             | -2.55  | -3.04  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.22   | 3.60              | 5.97   | 9.25   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.16  | 1.94              | 4.41   | 7.43   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.16  | 1.94              | 4.41   | 7.43   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.77  | -1.71             | -1.10  | -0.82  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.84   | 1.51              | 2.04   | 2.91   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.43  | -9.94             | -9.09  | -10.35 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -8.23  | -9.69             | -8.85  | -10.06 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -8.23  | -9.69             | -8.85  | -10.06 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.06  | -0.08             | -0.08  | -0.09  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.10  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.21  | -0.26             | -0.26  | -0.30  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 6.22   | 9.83              | 12.08  | 16.57  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.00   | 1.60              | 1.99   | 2.74   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.57   | 1.19              | 1.73   | 2.55   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.37   | 2.18              | 2.68   | 3.69   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.48  | -0.59             | -0.57  | -0.68  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.44  | -0.54             | -0.52  | -0.62  |



**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.57  | -0.70             | -0.68  | -0.81  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -0.72  | -0.89             | -0.87  | -1.03  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.14   | 0.24              | 0.30   | 0.42   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.10   | 0.18              | 0.25   | 0.36   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.10  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.33  | -1.64             | -1.60  | -1.90  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.23  | -0.29             | -0.28  | -0.33  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -0.88  | -1.09             | -1.06  | -1.26  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.41  | -0.50             | -0.49  | -0.58  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -0.90  | -1.11             | -1.08  | -1.29  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -1.06  | -1.31             | -1.27  | -1.51  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.81  | -2.24             | -2.17  | -2.59  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.98   | 1.54              | 1.89   | 2.59   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -3.28  | -4.06             | -3.94  | -4.70  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -3.28  | -4.05             | -3.94  | -4.69  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.62  | -0.72             | -0.65  | -0.73  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.12  | -0.15             | -0.15  | -0.18  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.32  | -2.87             | -2.79  | -3.33  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.60  | -1.98             | -1.92  | -2.29  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.05   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.03   | 0.05   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.22  | -0.28             | -0.27  | -0.32  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.89  | -2.33             | -2.27  | -2.70  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.77  | -2.19             | -2.13  | -2.53  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.48  | -3.06             | -2.97  | -3.55  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -2.18  | -2.70             | -2.62  | -3.12  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.45  | -0.56             | -0.54  | -0.65  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.04             | -0.03  | -0.04  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 34.66  | 58.42             | 75.20  | 105.50 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 34.66  | 58.43             | 75.21  | 105.51 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.10  | -0.12             | -0.12  | -0.14  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 4.40   | 7.07              | 8.81   | 12.17  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 4.07   | 6.66              | 8.41   | 11.69  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.10  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.40  | -0.50             | -0.48  | -0.58  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -0.50  | -0.61             | -0.60  | -0.71  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -0.50  | -0.61             | -0.60  | -0.71  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.49  | -0.61             | -0.59  | -0.70  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.00   | 1.60              | 1.99   | 2.74   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.18  | -0.22             | -0.22  | -0.26  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -4.89  | -6.05             | -5.88  | -7.00  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -3.77  | -4.67             | -4.53  | -5.40  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.94  | -1.17             | -1.13  | -1.35  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.20  | -0.25             | -0.24  | -0.29  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.10  | -0.13             | -0.12  | -0.15  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.36  | -0.44             | -0.43  | -0.52  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.38  | -0.47             | -0.46  | -0.54  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.38  | -0.47             | -0.46  | -0.54  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.04   | 0.05   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.10  | -0.12             | -0.12  | -0.14  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.29  | -0.36             | -0.35  | -0.42  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.11  | -0.14             | -0.14  | -0.16  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.22  | -0.27             | -0.27  | -0.32  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.24  | -0.30             | -0.29  | -0.35  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.24  | -0.30             | -0.29  | -0.35  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.37  | -1.69             | -1.64  | -1.96  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.62  | -4.47             | -4.35  | -5.18  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.28  | -0.34             | -0.33  | -0.40  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.88   | 1.46              | 1.85   | 2.57   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.88   | 1.46              | 1.85   | 2.57   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.16             | -0.15  | -0.18  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.13  | -0.16             | -0.15  | -0.18  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.14  | -0.17             | -0.17  | -0.20  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.42  | -3.00             | -2.91  | -3.47  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.47  | -1.82             | -1.77  | -2.11  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.93  | -2.38             | -2.31  | -2.76  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.93  | -2.38             | -2.31  | -2.76  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.43  | -0.53             | -0.51  | -0.61  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.14  | -0.17             | -0.17  | -0.20  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.53  | -0.65             | -0.63  | -0.75  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.63   | 9.10              | 11.37  | 15.73  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.11  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.91   | 9.44              | 11.70  | 16.12  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.02  | -0.03             | -0.02  | -0.03  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.01  | -1.25             | -1.21  | -1.44  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.01  | -1.25             | -1.21  | -1.44  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.01  | -1.25             | -1.21  | -1.44  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.01  | -1.25             | -1.21  | -1.44  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.44  | -0.54             | -0.52  | -0.62  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.25  | -1.54             | -1.50  | -1.79  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -2.93  | -3.59             | -3.44  | -4.06  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -2.97  | -3.63             | -3.48  | -4.11  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 8.64   | 13.64             | 16.74  | 22.96  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 9.07   | 14.41             | 17.78  | 24.45  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.02   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.73  | 24.92             | 30.70  | 42.16  |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.18  | -0.22             | -0.21  | -0.26  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.14  | -0.18             | -0.17  | -0.21  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.20   | 10.25             | 21.80  | 36.17  |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 27.45  | 43.94             | 54.52  | 75.17  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 27.45  | 43.94             | 54.52  | 75.17  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.17   | 10.22             | 21.77  | 36.14  |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.18   | 10.22             | 21.77  | 36.14  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.18   | 10.23             | 21.78  | 36.15  |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.18   | 10.23             | 21.78  | 36.14  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.20   | 10.25             | 21.80  | 36.17  |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.42  | -2.99             | -2.90  | -3.45  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.34  | -2.88             | -2.79  | -3.32  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.20  | -0.24             | -0.24  | -0.28  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.01   | 12.86             | 15.99  | 22.07  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.46  | -0.57             | -0.55  | -0.66  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.46  | -0.57             | -0.55  | -0.66  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 7.87   | 12.44             | 15.30  | 21.01  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.17  | -0.21             | -0.20  | -0.24  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.23  | -0.29             | -0.28  | -0.33  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -7.01  | -8.67             | -8.43  | -10.04 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.87  | -1.08             | -1.05  | -1.25  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.28             | -0.27  | -0.32  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.09  | -0.11             | -0.10  | -0.12  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.42   | 8.57              | 10.53  | 14.44  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.81  | -1.01             | -0.98  | -1.17  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.18  | -0.23             | -0.22  | -0.26  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.33   | 2.69              | 3.84   | 5.64   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 1.06   | 2.36              | 3.52   | 5.26   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.71   | 1.92              | 3.09   | 4.75   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -3.08  | -3.77             | -3.61  | -4.26  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.23  | -2.73             | -2.63  | -3.10  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.09   | 8.48              | 12.30  | 18.16  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.75   | 1.24              | 1.58   | 2.20   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.76   | 1.25              | 1.59   | 2.21   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.37  | -0.46             | -0.44  | -0.53  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.22             | -0.22  | -0.26  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | -0.01  |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.05  | -0.06             | -0.05  | -0.05  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.33  | -0.41             | -0.39  | -0.47  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.36  | -0.45             | -0.43  | -0.52  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.15  | -0.18             | -0.18  | -0.21  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.59  | -4.43             | -4.31  | -5.13  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.29  | -0.35             | -0.34  | -0.41  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.28  | -0.35             | -0.34  | -0.41  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.67  | -2.06             | -2.00  | -2.39  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.04              | 0.05   | 0.07   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.08  | -1.34             | -1.30  | -1.55  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -25.85 | -30.32            | -27.53 | -31.15 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -13.04 | -14.77            | -12.74 | -13.81 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -25.97 | -30.47            | -27.67 | -31.32 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -25.87 | -30.35            | -27.56 | -31.18 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -25.85 | -30.32            | -27.53 | -31.15 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.10  | -0.13             | -0.13  | -0.15  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -3.12  | -3.85             | -3.75  | -4.46  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.07  | -0.08  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.20  | -0.24             | -0.24  | -0.28  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.38  | -0.47             | -0.46  | -0.55  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.19  | -0.23             | -0.23  | -0.27  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.20             | -0.20  | -0.24  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.59   | 0.99              | 1.28   | 1.80   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.40   | 10.71             | 13.72  | 19.21  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 19.32  | 33.28             | 43.46  | 61.37  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 19.32  | 33.28             | 43.46  | 61.37  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 14.26  | 27.03             | 37.38  | 54.12  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 15.15  | 28.13             | 38.45  | 55.40  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -6.72  | -8.30             | -8.07  | -9.62  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -7.04  | -8.71             | -8.46  | -10.09 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -7.04  | -8.70             | -8.46  | -10.08 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.13              | 0.16   | 0.23   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.12  | -0.15             | -0.14  | -0.17  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.08  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.77  | -0.95             | -0.93  | -1.10  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.36  | -0.43             | -0.41  | -0.48  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -3.27  | -3.87             | -3.56  | -4.07  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.27  | -3.87             | -3.56  | -4.07  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.93  | -3.45             | -3.15  | -3.58  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.93  | -3.45             | -3.15  | -3.58  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.09  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.22  | -2.74             | -2.66  | -3.16  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.40  | -1.72             | -1.67  | -1.99  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.88  | -2.33             | -2.26  | -2.69  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.22             | -0.21  | -0.25  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.83  | -2.26             | -2.20  | -2.62  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.02  | 0.02              | 0.07   | 0.13   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.64  | -0.75             | -0.67  | -0.76  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -2.65  | -3.28             | -3.19  | -3.80  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -4.48  | -5.54             | -5.38  | -6.42  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.84  | -1.04             | -1.01  | -1.20  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -0.84  | -1.04             | -1.01  | -1.20  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.84  | -1.04             | -1.01  | -1.20  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -0.63  | -0.78             | -0.76  | -0.91  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.07  | -0.09             | -0.08  | -0.10  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -1.74  | -1.83             | -1.39  | -1.32  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.87  | -1.08             | -1.05  | -1.25  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -0.87  | -1.08             | -1.05  | -1.25  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.02  | -1.26             | -1.22  | -1.46  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.32   | 10.41             | 21.95  | 36.35  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.46  | -3.04             | -2.95  | -3.52  |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.59  | -0.73             | -0.71  | -0.84  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.20  | -0.24             | -0.23  | -0.28  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.15              | 0.21   | 0.30   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.58  | -3.20             | -3.11  | -3.70  |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.37  | -2.93             | -2.85  | -3.40  |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -1.59  | -0.96             | 0.26   | 1.34   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -1.59  | -0.96             | 0.26   | 1.34   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.51  | -0.86             | 0.36   | 1.45   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.47  | -0.59             | -0.57  | -0.68  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.86   | 4.61              | 5.76   | 7.96   |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.47   | 1.77              | 3.14   | 4.96   |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.36   | 2.77              | 3.96   | 5.82   |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.36   | 2.77              | 3.96   | 5.82   |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.17  | -1.45             | -1.41  | -1.68  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -6.42  | -7.94             | -7.71  | -9.19  |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -6.44  | -7.96             | -7.73  | -9.22  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -6.43  | -7.94             | -7.72  | -9.20  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.68  | 38.50             | 51.25  | 73.00  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 21.75  | 38.58             | 51.33  | 73.09  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 21.68  | 38.50             | 51.25  | 73.00  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 22.76  | 39.83             | 52.55  | 74.54  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -7.29  | -8.63             | -7.93  | -9.06  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -7.29  | -8.63             | -7.93  | -9.06  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -7.29  | -8.63             | -7.93  | -9.06  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.29  | -8.62             | -7.93  | -9.06  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.29  | -8.62             | -7.93  | -9.06  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.17   | 0.28              | 0.34   | 0.47   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.09  | -0.11             | -0.11  | -0.13  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.76  | -2.17             | -2.11  | -2.51  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.49  | -0.60             | -0.58  | -0.70  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -5.19  | -6.39             | -6.17  | -7.32  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.77  | -0.92             | -0.86  | -0.99  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.24  | -0.30             | -0.29  | -0.35  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.24  | -0.30             | -0.29  | -0.35  |

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.07  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.10  | -0.12  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.10             | -0.09  | -0.11  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.05  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.95  | -1.18             | -1.14  | -1.36  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -0.56  | -0.69             | -0.67  | -0.80  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.57  | -0.71             | -0.69  | -0.82  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -2.03  | -2.51             | -2.44  | -2.91  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.31  | -0.38             | -0.37  | -0.44  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 14.32  | 22.61             | 27.77  | 38.09  |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.69  | -2.09             | -2.03  | -2.42  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 2.44   | 5.73              | 8.79   | 13.24  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.48   | 5.79              | 8.84   | 13.31  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 2.48   | 5.79              | 8.84   | 13.31  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -0.41  | -0.51             | -0.49  | -0.59  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.12  | -0.15             | -0.15  | -0.18  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.20  | -0.24             | -0.22  | -0.25  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.20  | -0.24             | -0.22  | -0.25  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.20  | -0.24             | -0.22  | -0.25  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.68  | -0.83             | -0.80  | -0.95  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.01  | -0.01  |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.04  | -1.28             | -1.24  | -1.48  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.09              | 0.19   | 0.32   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.15   | 0.27              | 0.37   | 0.53   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.20  | -0.24             | -0.23  | -0.28  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.14  | -0.17             | -0.17  | -0.20  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.27   | 11.94             | 15.10  | 21.00  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.16  | -0.20             | -0.20  | -0.24  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.62  | -2.00             | -1.95  | -2.32  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.07             | -0.06  | -0.08  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.05  | -0.05             | -0.04  | -0.04  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.64  | -0.75             | -0.68  | -0.76  |



**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.52  | -0.64             | -0.62  | -0.74  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 27.87  | 44.46             | 55.03  | 75.77  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -1.40  | -1.74             | -1.69  | -2.01  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.06  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.09              | 0.19   | 0.32   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.11  | -0.13             | -0.13  | -0.15  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.90   | 3.01              | 3.69   | 5.07   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.88   | 2.98              | 3.67   | 5.05   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.88   | 2.98              | 3.67   | 5.04   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.26  | -1.56             | -1.51  | -1.81  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -9.30  | -11.49            | -11.17 | -13.31 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.28  | -11.47            | -11.15 | -13.29 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -9.14  | -11.29            | -10.98 | -13.08 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.63  | -0.78             | -0.75  | -0.90  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.18  | -0.22             | -0.22  | -0.26  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.26   | 2.04              | 2.55   | 3.52   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.16  | -0.19             | -0.19  | -0.23  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.00   | 8.04              | 10.02  | 13.83  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.00   | 8.04              | 10.02  | 13.83  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-82. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.71  | -0.88             | -0.85  | -1.01  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.43  | -0.53             | -0.52  | -0.61  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.07  | -0.09             | -0.09  | -0.11  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.22  | -0.27             | -0.26  | -0.31  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -0.92  | -1.13             | -1.10  | -1.31  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -0.71  | -0.87             | -0.85  | -1.01  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.76  | -2.18             | -2.11  | -2.52  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -0.36  | -0.45             | -0.44  | -0.52  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.31  | -0.39             | -0.38  | -0.45  |

<sup>a</sup>. Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup>. Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup>. Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.69  | -1.82             | -1.81  | -2.03  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.28  | -7.27             | -7.12  | -7.76  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -6.90  | -7.46             | -7.39  | -8.31  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -3.36  | -3.63             | -3.59  | -4.03  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.20  | -1.30             | -1.29  | -1.45  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.38  | -0.37             | -0.36  | -0.38  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.05              | 0.06   | 0.08   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.26  | -0.24             | -0.24  | -0.25  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.00  | -3.24             | -3.21  | -3.60  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -3.73  | -4.03             | -3.99  | -4.49  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.73  | -4.03             | -3.99  | -4.49  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.72  | -0.78             | -0.77  | -0.86  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.70  | -0.76             | -0.75  | -0.85  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.56  | -0.60             | -0.59  | -0.67  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.36  | -0.39             | -0.38  | -0.43  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.37  | -1.48             | -1.47  | -1.65  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.11  | 36.05             | 38.43  | 51.75  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.19   | 0.37              | 0.39   | 0.50   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.08  | -1.17             | -1.16  | -1.30  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.35  | -0.38             | -0.37  | -0.42  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.08  | -3.17             | -3.12  | -3.45  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.35  | -3.62             | -3.58  | -4.03  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.15  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -36.44 | -39.43            | -39.03 | -43.89 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -33.24 | -35.97            | -35.61 | -40.05 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -36.46 | -39.46            | -39.06 | -43.93 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.35  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.45   | 2.69              | 2.96   | 4.23   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -16.19 | -17.52            | -17.34 | -19.50 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -15.95 | -17.26            | -17.08 | -19.21 |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -16.19 | -17.52            | -17.34 | -19.50 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 130.38 | 234.96            | 244.97 | 314.05 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 130.38 | 234.96            | 244.97 | 314.05 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 71.89  | 129.91            | 135.47 | 173.76 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.64  | -1.77             | -1.76  | -1.97  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 25.34  | 45.31             | 47.21  | 60.45  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 25.79  | 45.80             | 47.69  | 60.98  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.56  | -6.90             | -6.80  | -7.57  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.57  | -6.91             | -6.81  | -7.58  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -6.57  | -6.91             | -6.81  | -7.58  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.69  | -1.82             | -1.81  | -2.03  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.07             | -0.06  | -0.07  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.22  | -2.94             | -2.84  | -2.97  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -28.72 | -30.53            | -30.15 | -33.68 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -4.17  | -4.51             | -4.47  | -5.02  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 14.25  | 25.32             | 26.37  | 33.73  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -5.52  | -5.97             | -5.91  | -6.65  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.33  | -0.36             | -0.35  | -0.40  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.24  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 11.58  | 22.01             | 23.03  | 29.79  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 11.58  | 22.01             | 23.03  | 29.79  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 11.58  | 22.01             | 23.03  | 29.79  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.37  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.17  | -1.27             | -1.26  | -1.41  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.98  | -2.14             | -2.12  | -2.38  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.98  | -2.14             | -2.12  | -2.38  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.98  | -2.14             | -2.12  | -2.38  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -6.83  | -7.39             | -7.32  | -8.23  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -14.14 | -15.31            | -15.15 | -17.04 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -13.72 | -14.84            | -14.69 | -16.52 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.48  | -2.16             | -2.06  | -2.10  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 10.84  | 44.03             | 47.84  | 67.08  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.84  | 44.03             | 47.84  | 67.08  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.16  | 43.29             | 47.11  | 66.25  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.06  | -1.15             | -1.13  | -1.28  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.49  | -0.53             | -0.53  | -0.59  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.06  | -1.15             | -1.13  | -1.28  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.05  | -1.14             | -1.12  | -1.26  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -12.56 | -13.51            | -13.37 | -15.00 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -12.69 | -13.66            | -13.52 | -15.17 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -12.13 | -13.06            | -12.91 | -14.49 |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -8.18  | -8.62             | -8.50  | -9.46  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.65  | -1.79             | -1.77  | -1.99  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.41  | -1.53             | -1.52  | -1.70  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -5.10  | -5.52             | -5.46  | -6.14  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -15.99 | -17.30            | -17.13 | -19.26 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -15.97 | -17.29            | -17.11 | -19.24 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -14.70 | -15.91            | -15.75 | -17.71 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -14.56 | -15.76            | -15.60 | -17.55 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.26  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.72  | -2.81             | -2.76  | -3.06  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -11.32 | -12.25            | -12.13 | -13.64 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -11.32 | -12.25            | -12.13 | -13.64 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -10.22 | -11.06            | -10.95 | -12.31 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.38  | -0.41             | -0.40  | -0.45  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.43  | -0.46             | -0.46  | -0.51  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.84  | -4.16             | -4.12  | -4.63  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -5.07  | -5.49             | -5.44  | -6.11  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -39.94 | -42.87            | -42.39 | -47.53 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -40.77 | -43.77            | -43.28 | -48.53 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.82  | -7.38             | -7.31  | -8.22  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -5.91  | -6.40             | -6.33  | -7.12  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 4.62   | 17.66             | 19.15  | 26.75  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 13.80             | 15.37  | 22.59  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.80   | 13.80             | 15.37  | 22.59  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.06  | -1.50             | -1.10  | -0.05  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.42   | 5.52              | 5.84   | 7.76   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -23.19 | -22.18            | -21.57 | -23.06 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -22.63 | -21.57            | -20.97 | -22.38 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -22.63 | -21.57            | -20.97 | -22.38 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.18  | -0.20             | -0.19  | -0.22  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.20  | -0.22             | -0.21  | -0.24  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.64  | -0.69             | -0.68  | -0.77  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 18.56  | 33.03             | 34.40  | 44.00  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 3.03   | 5.48              | 5.71   | 7.33   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.94   | 5.02              | 5.36   | 7.23   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.11   | 7.37              | 7.68   | 9.83   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.33  | -1.44             | -1.42  | -1.60  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.24  | -1.35             | -1.33  | -1.50  |



**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -1.58  | -1.71             | -1.69  | -1.90  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -2.02  | -2.19             | -2.17  | -2.44  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.44   | 0.84              | 0.88   | 1.14   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.32   | 0.70              | 0.74   | 0.98   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.20  | -0.22             | -0.21  | -0.24  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.70  | -4.00             | -3.96  | -4.45  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.64  | -0.69             | -0.68  | -0.77  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.45  | -2.65             | -2.63  | -2.95  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.13  | -1.23             | -1.21  | -1.36  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -2.50  | -2.70             | -2.68  | -3.01  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -2.93  | -3.14             | -3.11  | -3.48  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.04  | -5.45             | -5.39  | -6.07  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.91   | 5.17              | 5.38   | 6.88   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -9.12  | -9.87             | -9.77  | -10.98 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -9.11  | -9.86             | -9.76  | -10.98 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.69  | -1.56             | -1.51  | -1.59  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.34  | -0.37             | -0.37  | -0.41  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.47  | -7.00             | -6.93  | -7.79  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -4.46  | -4.82             | -4.78  | -5.37  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.10              | 0.10   | 0.14   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.09              | 0.10   | 0.13   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.62  | -0.67             | -0.66  | -0.75  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.25  | -5.68             | -5.62  | -6.32  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -4.92  | -5.33             | -5.28  | -5.93  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.89  | -7.46             | -7.38  | -8.30  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -6.08  | -6.58             | -6.51  | -7.32  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.26  | -1.37             | -1.35  | -1.52  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 105.57 | 208.64            | 218.98 | 285.04 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 105.59 | 208.66            | 218.99 | 285.06 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 13.20  | 24.20             | 25.26  | 32.48  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 12.28  | 23.21             | 24.28  | 31.38  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.24  |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.13  | -1.22             | -1.21  | -1.36  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.38  | -1.50             | -1.48  | -1.66  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.38  | -1.50             | -1.48  | -1.66  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.37  | -1.49             | -1.47  | -1.66  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.04   | 5.49              | 5.72   | 7.34   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.50  | -0.54             | -0.54  | -0.61  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -13.61 | -14.73            | -14.58 | -16.40 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -10.51 | -11.37            | -11.25 | -12.66 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -2.56  | -2.77             | -2.74  | -3.08  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.56  | -0.60             | -0.60  | -0.67  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.35  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.03  | -1.11             | -1.10  | -1.24  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.05  | -1.14             | -1.13  | -1.27  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.05  | -1.14             | -1.13  | -1.27  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.10              | 0.10   | 0.13   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.34  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -0.81  | -0.88             | -0.87  | -0.98  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.33  | -0.36             | -0.35  | -0.40  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.61  | -0.67             | -0.66  | -0.74  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.67  | -0.72             | -0.72  | -0.80  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.67  | -0.72             | -0.72  | -0.80  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.80  | -4.12             | -4.07  | -4.58  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -10.07 | -10.90            | -10.79 | -12.14 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -0.77  | -0.84             | -0.83  | -0.93  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.74   | 5.17              | 5.40   | 6.98   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.74   | 5.17              | 5.40   | 6.98   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.15  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.15  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.40  | -0.44             | -0.43  | -0.48  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.40  | -0.43             | -0.43  | -0.48  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.43  | -0.47             | -0.46  | -0.52  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.74  | -7.30             | -7.23  | -8.12  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -4.10  | -4.43             | -4.39  | -4.94  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -5.36  | -5.80             | -5.74  | -6.45  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.36  | -5.80             | -5.74  | -6.45  |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.19  | -1.29             | -1.28  | -1.44  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.38  | -0.41             | -0.41  | -0.46  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.46  | -1.59             | -1.57  | -1.76  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 16.99  | 31.33             | 32.72  | 42.11  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.20  | -0.22             | -0.22  | -0.25  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.77  | 32.17             | 33.55  | 43.05  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.06  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.16  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -2.81  | -3.04             | -3.01  | -3.38  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -2.81  | -3.04             | -3.01  | -3.38  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.81  | -3.04             | -3.01  | -3.38  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.81  | -3.04             | -3.01  | -3.38  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.24  | -1.35             | -1.33  | -1.50  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -3.47  | -3.76             | -3.72  | -4.18  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -8.16  | -8.60             | -8.48  | -9.44  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.25  | -8.69             | -8.57  | -9.54  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.23  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 25.78  | 45.79             | 47.69  | 60.98  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 27.11  | 48.69             | 50.75  | 65.02  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.01   | 0.05              | 0.06   | 0.08   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.05              | 0.06   | 0.08   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 46.98  | 84.02             | 87.55  | 112.08 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.50  | -0.54             | -0.53  | -0.60  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.41  | -0.44             | -0.44  | -0.49  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.20   | 67.35             | 74.66  | 108.88 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 82.36  | 149.71            | 156.19 | 200.53 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 82.36  | 149.71            | 156.19 | 200.53 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.13   | 67.27             | 74.59  | 108.80 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 6.14   | 67.28             | 74.59  | 108.80 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 6.15   | 67.30             | 74.61  | 108.82 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 6.14   | 67.29             | 74.60  | 108.81 |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.20   | 67.35             | 74.66  | 108.88 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -6.74  | -7.26             | -7.18  | -8.06  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.50  | -7.00             | -6.92  | -7.77  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.56  | -0.61             | -0.60  | -0.68  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 24.07  | 43.95             | 45.86  | 58.93  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.29  | -1.39             | -1.38  | -1.55  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.29  | -1.39             | -1.38  | -1.55  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.49  | 41.89             | 43.63  | 55.83  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.46  | -0.50             | -0.49  | -0.55  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.65  | -0.70             | -0.70  | -0.78  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -19.51 | -21.11            | -20.90 | -23.50 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -2.39  | -2.59             | -2.56  | -2.88  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.62  | -0.68             | -0.67  | -0.75  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.24  | -0.26             | -0.26  | -0.29  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 16.18  | 28.79             | 29.99  | 38.36  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.27  | -2.45             | -2.43  | -2.73  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.19  | -0.21             | -0.21  | -0.23  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.54  | -0.58             | -0.57  | -0.64  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.31   | 10.98             | 11.70  | 15.74  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.57   | 10.17             | 10.90  | 14.85  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.57   | 9.09              | 9.83   | 13.65  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -8.56  | -9.00             | -8.88  | -9.87  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -6.20  | -6.55             | -6.47  | -7.21  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 13.37  | 35.25             | 37.64  | 50.86  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.27   | 4.37              | 4.58   | 5.93   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.29   | 4.39              | 4.60   | 5.96   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.99  | -1.05             | -1.04  | -1.16  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.53  | -0.57             | -0.56  | -0.63  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.14  | -0.16             | -0.15  | -0.17  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.22  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.15  | -0.12             | -0.11  | -0.10  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.91  | -0.99             | -0.98  | -1.10  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.00  | -1.08             | -1.07  | -1.21  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.42  | -0.45             | -0.45  | -0.50  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.98  | -10.80            | -10.69 | -12.02 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.77  | -0.83             | -0.83  | -0.93  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.77  | -0.83             | -0.82  | -0.93  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.11             | -0.11  | -0.13  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.64  | -5.02             | -4.97  | -5.59  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.13              | 0.14   | 0.18   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.01  | -3.26             | -3.23  | -3.63  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -71.00 | -66.92            | -64.94 | -68.95 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -35.56 | -30.26            | -28.87 | -29.08 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -71.33 | -67.28            | -65.30 | -69.36 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -71.10 | -67.03            | -65.05 | -69.08 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -71.00 | -66.92            | -64.94 | -68.95 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -8.69  | -9.40             | -9.31  | -10.47 |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.29  | -0.32             | -0.31  | -0.35  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.29  | -0.32             | -0.31  | -0.35  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.55  | -0.59             | -0.58  | -0.66  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.06  | -1.15             | -1.14  | -1.28  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.53  | -0.57             | -0.56  | -0.63  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.22  | -0.24             | -0.23  | -0.26  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.45  | -0.49             | -0.48  | -0.54  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.74   | 3.50              | 3.68   | 4.80   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 19.46  | 38.02             | 39.87  | 51.81  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 59.26  | 121.08            | 127.37 | 166.63 |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 59.26  | 121.08            | 127.37 | 166.63 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 45.15  | 105.81            | 112.24 | 149.63 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 47.61  | 108.48            | 114.89 | 152.60 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -18.66 | -20.19            | -19.99 | -22.48 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -19.59 | -21.20            | -20.98 | -23.60 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -19.57 | -21.18            | -20.97 | -23.58 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.45              | 0.47   | 0.60   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.35  | -0.38             | -0.37  | -0.42  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.16  | -0.17             | -0.17  | -0.19  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.20  | -2.38             | -2.35  | -2.65  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.15             | -0.14  | -0.16  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.93  | -0.96             | -0.95  | -1.05  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -9.01  | -8.71             | -8.49  | -9.12  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.01  | -8.71             | -8.49  | -9.12  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -8.06  | -7.68             | -7.47  | -7.98  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.06  | -7.68             | -7.47  | -7.98  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.18             | -0.18  | -0.20  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -6.19  | -6.68             | -6.61  | -7.42  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -3.88  | -4.18             | -4.13  | -4.64  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.24  | -5.67             | -5.61  | -6.31  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.50  | -0.54             | -0.53  | -0.60  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.10  | -5.51             | -5.45  | -6.12  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.01  | 0.25              | 0.28   | 0.42   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.75  | -1.64             | -1.59  | -1.68  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -7.38  | -7.99             | -7.91  | -8.89  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -12.48 | -13.51            | -13.37 | -15.03 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -2.33  | -2.52             | -2.50  | -2.81  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -2.33  | -2.52             | -2.50  | -2.81  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -2.33  | -2.52             | -2.50  | -2.81  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -1.73  | -1.87             | -1.85  | -2.08  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.21  | -0.23             | -0.23  | -0.26  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -4.66  | -3.06             | -2.77  | -2.30  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.36  | -2.55             | -2.52  | -2.84  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -2.36  | -2.55             | -2.52  | -2.84  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -2.75  | -2.98             | -2.95  | -3.31  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 6.54   | 67.72             | 75.03  | 109.29 |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -6.84  | -7.41             | -7.33  | -8.24  |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.63  | -1.77             | -1.75  | -1.97  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.54  | -0.59             | -0.58  | -0.66  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.13  | -0.14             | -0.13  | -0.15  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.59              | 0.62   | 0.82   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -7.05  | -7.62             | -7.55  | -8.49  |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -6.60  | -7.14             | -7.07  | -7.95  |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -3.85  | 1.94              | 2.72   | 5.57   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -3.86  | 1.94              | 2.72   | 5.57   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.67  | 2.14              | 2.92   | 5.80   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.34  | -1.45             | -1.44  | -1.62  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 8.62   | 15.87             | 16.57  | 21.32  |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.99   | 9.40              | 10.26  | 14.52  |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 4.43   | 11.33             | 12.08  | 16.27  |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 4.43   | 11.33             | 12.08  | 16.27  |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.07  | -3.32             | -3.28  | -3.69  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -17.88 | -19.35            | -19.15 | -21.54 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -17.91 | -19.38            | -19.19 | -21.58 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -17.89 | -19.36            | -19.17 | -21.56 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 67.16  | 143.56            | 151.45 | 199.44 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 67.33  | 143.75            | 151.64 | 199.65 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 67.16  | 143.56            | 151.45 | 199.44 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 70.17  | 146.82            | 154.68 | 203.07 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -20.16 | -19.49            | -18.99 | -20.40 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -20.16 | -19.49            | -18.99 | -20.40 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -20.16 | -19.49            | -18.99 | -20.40 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -20.15 | -19.48            | -18.98 | -20.39 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -20.15 | -19.48            | -18.98 | -20.39 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.52   | 0.94              | 0.98   | 1.26   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.04  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.05  | -0.06             | -0.06  | -0.06  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.25  | -0.27             | -0.27  | -0.30  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -4.89  | -5.29             | -5.23  | -5.89  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.36  | -1.47             | -1.45  | -1.64  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -14.41 | -15.42            | -15.24 | -17.06 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.10  | -2.09             | -2.04  | -2.22  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.67  | -0.73             | -0.72  | -0.81  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.67  | -0.73             | -0.72  | -0.81  |

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.17  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.28  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -2.65  | -2.87             | -2.84  | -3.19  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.06  | -0.07             | -0.07  | -0.08  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -1.53  | -1.66             | -1.64  | -1.85  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.58  | -1.71             | -1.69  | -1.90  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -5.66  | -6.12             | -6.06  | -6.82  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.89  | -0.96             | -0.95  | -1.07  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 42.73  | 75.95             | 79.10  | 101.16 |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -4.63  | -5.01             | -4.96  | -5.58  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 8.38   | 25.54             | 27.45  | 37.65  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 8.50   | 25.67             | 27.58  | 37.79  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 8.50   | 25.67             | 27.58  | 37.79  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.14  | -1.24             | -1.22  | -1.37  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.35  | -0.38             | -0.38  | -0.42  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.56  | -0.54             | -0.53  | -0.57  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.56  | -0.54             | -0.53  | -0.57  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.56  | -0.54             | -0.53  | -0.57  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.85  | -1.95             | -1.92  | -2.14  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.05  | -0.02             | -0.01  | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.89  | -3.11             | -3.08  | -3.46  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.05   | 0.59              | 0.65   | 0.96   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.51   | 1.09              | 1.15   | 1.51   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.53  | -0.58             | -0.57  | -0.64  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.38  | -0.41             | -0.41  | -0.46  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.95  | 41.65             | 43.59  | 56.38  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.47  | -0.51             | -0.50  | -0.56  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.52  | -4.89             | -4.84  | -5.44  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.17  | -0.19             | -0.18  | -0.21  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.12  | -0.10             | -0.09  | -0.09  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -1.75  | -1.64             | -1.59  | -1.68  |



**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.44  | -1.56             | -1.54  | -1.73  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 83.43  | 150.87            | 157.33 | 201.83 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -3.91  | -4.22             | -4.18  | -4.70  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.16             | -0.16  | -0.18  |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.59              | 0.65   | 0.96   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.03  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.36  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.68   | 10.10             | 10.52  | 13.46  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.63   | 10.06             | 10.48  | 13.42  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.61   | 10.04             | 10.47  | 13.40  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.51  | -3.80             | -3.76  | -4.23  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -25.88 | -28.00            | -27.72 | -31.17 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -25.83 | -27.95            | -27.67 | -31.11 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -25.43 | -27.52            | -27.24 | -30.63 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -1.71  | -1.86             | -1.84  | -2.07  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.51  | -0.56             | -0.55  | -0.62  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.73   | 6.93              | 7.24   | 9.33   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.46  | -0.49             | -0.49  | -0.55  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.00  | 27.51             | 28.72  | 36.93  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 15.00  | 27.51             | 28.72  | 36.93  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-83. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.97  | -2.13             | -2.11  | -2.37  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.23  | -1.33             | -1.32  | -1.49  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.22  | -0.24             | -0.24  | -0.27  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.61  | -0.66             | -0.65  | -0.74  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -2.55  | -2.76             | -2.74  | -3.08  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -1.97  | -2.13             | -2.11  | -2.37  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -4.90  | -5.30             | -5.25  | -5.90  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.01  | -1.10             | -1.09  | -1.22  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.87  | -0.94             | -0.93  | -1.05  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -2.38  | -2.51             | -2.51  | -2.79  |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -10.26 | -9.86             | -9.85  | -10.62 |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.72  | -10.22            | -10.22 | -11.37 |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.73  | -4.97             | -4.96  | -5.52  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.69  | -1.78             | -1.78  | -1.98  |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.60  | -0.57             | -0.56  | -0.61  |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.10              | 0.10   | 0.14   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.23  | -0.18             | -0.18  | -0.18  |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -4.22  | -4.43             | -4.43  | -4.93  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -5.26  | -5.52             | -5.52  | -6.14  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -5.26  | -5.52             | -5.52  | -6.14  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.01  | -1.06             | -1.06  | -1.18  |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.99  | -1.04             | -1.04  | -1.16  |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.77  | -0.80             | -0.80  | -0.89  |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.50  | -0.53             | -0.53  | -0.59  |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.93  | -2.03             | -2.03  | -2.26  |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.66  | 52.81             | 53.30  | 71.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.54              | 0.54   | 0.69   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -1.53  | -1.60             | -1.60  | -1.79  |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.49  | -0.51             | -0.51  | -0.57  |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.34  | -4.33             | -4.32  | -4.72  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -4.72  | -4.96             | -4.96  | -5.51  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.21  |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.13  | -0.14             | -0.14  | -0.15  |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -51.35 | -54.00            | -53.99 | -60.08 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -46.85 | -49.27            | -49.26 | -54.82 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -51.38 | -54.04            | -54.03 | -60.13 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.41  | -0.43             | -0.43  | -0.48  |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.60   | 4.04              | 4.09   | 5.79   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.10  | -0.10             | -0.10  | -0.11  |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -22.82 | -23.99            | -23.99 | -26.70 |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -22.49 | -23.65            | -23.65 | -26.32 |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -22.82 | -23.99            | -23.99 | -26.70 |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 182.74 | 337.30            | 339.50 | 430.63 |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 182.74 | 337.30            | 339.50 | 430.63 |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 100.75 | 186.53            | 187.76 | 238.27 |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.35  | -0.37             | -0.37  | -0.41  |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.31  | -2.43             | -2.43  | -2.70  |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 35.53  | 65.03             | 65.45  | 82.90  |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 36.15  | 65.68             | 66.10  | 83.62  |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.25  | -9.42             | -9.41  | -10.36 |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -9.25  | -9.42             | -9.41  | -10.36 |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -9.25  | -9.42             | -9.41  | -10.36 |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -2.38  | -2.51             | -2.51  | -2.79  |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -4.61  | -4.01             | -3.99  | -4.14  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -40.51 | -41.76            | -41.74 | -46.15 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | -5.88  | -6.19             | -6.19  | -6.88  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 19.99  | 36.33             | 36.56  | 46.25  |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -7.77  | -8.17             | -8.17  | -9.09  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.46  | -0.49             | -0.49  | -0.54  |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.28  | -0.30             | -0.30  | -0.33  |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.22  | 31.70             | 31.93  | 40.86  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.22  | 31.70             | 31.93  | 40.86  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.22  | 31.70             | 31.93  | 40.86  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -0.43  | -0.46             | -0.46  | -0.51  |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -1.65  | -1.74             | -1.74  | -1.93  |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.79  | -2.93             | -2.93  | -3.26  |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -2.79  | -2.93             | -2.93  | -3.26  |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.79  | -2.93             | -2.93  | -3.26  |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -9.63  | -10.13            | -10.12 | -11.27 |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -19.98 | -21.02            | -21.01 | -23.39 |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -19.40 | -20.41            | -20.40 | -22.71 |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.50  | -2.86             | -2.85  | -2.88  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 14.91  | 65.61             | 66.37  | 92.03  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 14.91  | 65.61             | 66.37  | 92.03  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.93  | 64.58             | 65.35  | 90.89  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.49  | -1.57             | -1.57  | -1.75  |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.75  | -0.79             | -0.79  | -0.88  |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.49  | -1.57             | -1.57  | -1.75  |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -1.49  | -1.56             | -1.56  | -1.74  |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -17.70 | -18.50            | -18.50 | -20.55 |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -17.89 | -18.70            | -18.69 | -20.76 |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -17.10 | -17.87            | -17.86 | -19.84 |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -11.55 | -11.79            | -11.78 | -12.98 |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.33  | -2.45             | -2.45  | -2.72  |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.99  | -2.10             | -2.10  | -2.33  |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -7.20  | -7.57             | -7.57  | -8.42  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -22.55 | -23.71            | -23.71 | -26.39 |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -22.53 | -23.69            | -23.69 | -26.36 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -20.72 | -21.79            | -21.78 | -24.24 |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -20.54 | -21.60            | -21.60 | -24.03 |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.31  | -0.32             | -0.32  | -0.36  |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -3.85  | -3.84             | -3.84  | -4.20  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -15.96 | -16.78            | -16.78 | -18.67 |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -15.96 | -16.78            | -16.78 | -18.67 |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -14.40 | -15.14            | -15.14 | -16.85 |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.54  | -0.56             | -0.56  | -0.62  |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.53  | -0.55             | -0.55  | -0.61  |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -5.23  | -5.50             | -5.50  | -6.12  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -7.16  | -7.53             | -7.53  | -8.38  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -56.28 | -58.65            | -58.64 | -65.06 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -57.45 | -59.88            | -59.87 | -66.43 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.62  | -10.11            | -10.11 | -11.25 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -8.33  | -8.76             | -8.76  | -9.75  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.36   | 26.27             | 26.57  | 36.70  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.98   | 21.03             | 21.33  | 31.02  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.98   | 21.03             | 21.33  | 31.02  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -4.04  | 0.22              | 0.29   | 1.96   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.79   | 7.41              | 7.48   | 9.95   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -32.72 | -29.90            | -29.82 | -31.55 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -31.92 | -29.06            | -28.99 | -30.62 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -31.92 | -29.06            | -28.99 | -30.62 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.08  | -0.09             | -0.09  | -0.10  |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.31  | -0.33             | -0.33  | -0.36  |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.00  | -1.05             | -1.05  | -1.16  |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 26.01  | 47.36             | 47.67  | 60.32  |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.28   | 7.91              | 7.96   | 10.09  |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.79   | 7.46              | 7.53   | 10.02  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.77   | 10.59             | 10.66  | 13.51  |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -1.87  | -1.97             | -1.97  | -2.19  |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.81  | -1.90             | -1.90  | -2.12  |



**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -2.22  | -2.34             | -2.34  | -2.60  |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | -2.90  | -3.05             | -3.05  | -3.40  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.64   | 1.23              | 1.24   | 1.58   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.45   | 1.03              | 1.04   | 1.36   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.29  | -0.30             | -0.30  | -0.34  |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -5.21  | -5.48             | -5.48  | -6.10  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.89  | -0.93             | -0.93  | -1.04  |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -3.46  | -3.63             | -3.63  | -4.04  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -1.60  | -1.68             | -1.68  | -1.87  |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | -3.52  | -3.70             | -3.70  | -4.12  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.22  | -0.23             | -0.23  | -0.26  |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.30  | -0.32             | -0.32  | -0.35  |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -4.08  | -4.25             | -4.25  | -4.71  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | -7.10  | -7.47             | -7.47  | -8.31  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.36  | -0.38             | -0.38  | -0.42  |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.08   | 7.41              | 7.46   | 9.43   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | -12.82 | -13.48            | -13.48 | -15.00 |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | -12.82 | -13.49            | -13.48 | -15.01 |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -2.38  | -2.10             | -2.09  | -2.18  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.39  |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.49  | -0.51             | -0.51  | -0.57  |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.11  | -9.58             | -9.58  | -10.66 |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -6.28  | -6.61             | -6.61  | -7.35  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.15              | 0.15   | 0.20   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.13              | 0.13   | 0.18   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.88  | -0.92             | -0.92  | -1.03  |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -7.40  | -7.78             | -7.78  | -8.65  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -6.94  | -7.30             | -7.30  | -8.12  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -9.71  | -10.21            | -10.21 | -11.36 |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -8.58  | -9.02             | -9.02  | -10.04 |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -1.78  | -1.87             | -1.87  | -2.08  |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.12  | -0.13             | -0.13  | -0.14  |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 147.77 | 301.34            | 303.56 | 390.92 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 147.79 | 301.36            | 303.58 | 390.94 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.39  | -0.41             | -0.41  | -0.46  |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 18.49  | 34.78             | 35.01  | 44.54  |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 17.20  | 33.43             | 33.66  | 43.04  |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -1.61  | -1.69             | -1.69  | -1.88  |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | -1.95  | -2.05             | -2.05  | -2.28  |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | -1.95  | -2.05             | -2.05  | -2.28  |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -1.94  | -2.05             | -2.04  | -2.28  |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 4.30   | 7.92              | 7.97   | 10.11  |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.71  | -0.75             | -0.75  | -0.83  |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -19.19 | -20.18            | -20.17 | -22.45 |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -14.80 | -15.57            | -15.57 | -17.32 |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -3.50  | -3.68             | -3.68  | -4.09  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.79  | -0.83             | -0.83  | -0.92  |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.41  | -0.44             | -0.44  | -0.48  |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -1.49  | -1.57             | -1.57  | -1.74  |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.48  | -1.56             | -1.56  | -1.73  |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -1.48  | -1.56             | -1.56  | -1.73  |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.08   | 0.14              | 0.14   | 0.18   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.40  | -0.42             | -0.42  | -0.47  |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -1.14  | -1.20             | -1.20  | -1.34  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.49  | -0.51             | -0.51  | -0.57  |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.04  |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.87  | -0.91             | -0.91  | -1.01  |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.93  | -0.98             | -0.98  | -1.09  |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.93  | -0.98             | -0.98  | -1.09  |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.36  | -0.38             | -0.38  | -0.42  |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.07             | -0.07  | -0.08  |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -5.36  | -5.64             | -5.64  | -6.27  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -14.20 | -14.93            | -14.93 | -16.61 |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -1.09  | -1.15             | -1.15  | -1.28  |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 3.93   | 7.54              | 7.59   | 9.68   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.93   | 7.54              | 7.59   | 9.68   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.18  | -0.19             | -0.19  | -0.21  |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.22  |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.69  | -0.73             | -0.73  | -0.81  |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.69  | -0.73             | -0.73  | -0.81  |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.73  | -0.77             | -0.77  | -0.85  |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.50  | -10.00            | -9.99  | -11.12 |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -5.78  | -6.08             | -6.08  | -6.76  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -7.55  | -7.94             | -7.94  | -8.83  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -7.55  | -7.94             | -7.94  | -8.83  |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.68  | -1.77             | -1.77  | -1.97  |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.52  | -0.55             | -0.55  | -0.61  |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.15  | -0.15             | -0.15  | -0.17  |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -2.06  | -2.17             | -2.17  | -2.42  |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 23.93  | 45.17             | 45.47  | 57.88  |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.27  | -0.29             | -0.29  | -0.32  |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 25.05  | 46.35             | 46.66  | 59.20  |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.02             | -0.02  | -0.02  |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.10  | -0.11             | -0.11  | -0.12  |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.06  | -0.06             | -0.06  | -0.07  |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.14  | -0.15             | -0.15  | -0.16  |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -3.96  | -4.16             | -4.16  | -4.63  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -3.96  | -4.16             | -4.16  | -4.63  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.96  | -4.16             | -4.16  | -4.63  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -3.96  | -4.16             | -4.16  | -4.63  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -1.81  | -1.90             | -1.90  | -2.12  |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -4.89  | -5.15             | -5.15  | -5.73  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -11.52 | -11.76            | -11.75 | -12.94 |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -11.63 | -11.87            | -11.87 | -13.07 |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.28  | -0.29             | -0.29  | -0.33  |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 36.14  | 65.67             | 66.09  | 83.61  |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 37.97  | 69.85             | 70.31  | 89.13  |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.11  | -0.12             | -0.12  | -0.13  |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.10              | 0.10   | 0.14   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.10              | 0.10   | 0.14   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 65.86  | 120.55            | 121.33 | 153.69 |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.03  | -0.04             | -0.04  | -0.04  |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.70  | -0.74             | -0.74  | -0.82  |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | -0.59  | -0.62             | -0.62  | -0.69  |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.29  | -0.31             | -0.31  | -0.34  |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.80   | 101.95            | 103.39 | 149.17 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 115.59 | 215.22            | 216.64 | 275.17 |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 115.59 | 215.22            | 216.64 | 275.17 |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 7.69   | 101.83            | 103.27 | 149.04 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 7.70   | 101.84            | 103.28 | 149.05 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 7.73   | 101.87            | 103.31 | 149.08 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 7.71   | 101.85            | 103.29 | 149.06 |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.80   | 101.95            | 103.39 | 149.17 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -9.50  | -9.93             | -9.93  | -11.03 |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -9.17  | -9.58             | -9.58  | -10.64 |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.81  | -0.85             | -0.85  | -0.95  |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 33.82  | 63.24             | 63.66  | 80.91  |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.81  | -1.91             | -1.91  | -2.12  |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -1.81  | -1.91             | -1.91  | -2.12  |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 32.95  | 60.11             | 60.49  | 76.58  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.62  | -0.65             | -0.65  | -0.73  |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.92  | -0.97             | -0.96  | -1.07  |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -27.48 | -28.90            | -28.89 | -32.15 |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -3.33  | -3.50             | -3.50  | -3.89  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.88  | -0.92             | -0.92  | -1.03  |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.34  | -0.36             | -0.36  | -0.40  |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 22.68  | 41.29             | 41.55  | 52.59  |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -3.19  | -3.36             | -3.36  | -3.74  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.27  | -0.29             | -0.28  | -0.32  |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.79  | -0.83             | -0.83  | -0.93  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.01   | 16.07             | 16.22  | 21.60  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.97   | 14.97             | 15.12  | 20.38  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.55   | 13.48             | 13.63  | 18.72  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -12.07 | -12.29            | -12.28 | -13.52 |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -8.74  | -8.96             | -8.95  | -9.87  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 18.60  | 51.69             | 52.18  | 69.76  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.17   | 6.29              | 6.34   | 8.13   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.21   | 6.33              | 6.37   | 8.17   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -1.30  | -1.34             | -1.34  | -1.48  |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.78  | -0.82             | -0.82  | -0.91  |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.21  | -0.22             | -0.22  | -0.25  |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.25  | -0.26             | -0.26  | -0.29  |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |         |                   |        |        |
|---|-------------------------------------|--|---|--|---------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2  | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.23   | -0.17             | -0.17  | -0.16  |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.29   | -1.35             | -1.35  | -1.50  |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01   | -0.01             | -0.01  | -0.01  |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.08   | -0.08             | -0.08  | -0.09  |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.16   | -0.17             | -0.17  | -0.19  |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -1.41   | -1.48             | -1.48  | -1.65  |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.07   | -0.08             | -0.08  | -0.09  |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.60   | -0.64             | -0.64  | -0.71  |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -14.06  | -14.79            | -14.79 | -16.46 |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.03   | -0.03             | -0.03  | -0.03  |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -1.03   | -1.08             | -1.08  | -1.21  |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -1.03   | -1.08             | -1.08  | -1.20  |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.14   | -0.14             | -0.14  | -0.16  |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -6.53   | -6.87             | -6.87  | -7.65  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09    | 0.19              | 0.19   | 0.25   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -4.25   | -4.47             | -4.47  | -4.97  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -100.21 | -90.06            | -89.81 | -94.37 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -50.32  | -40.20            | -40.00 | -39.88 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -100.68 | -90.56            | -90.31 | -94.93 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -100.42 | -90.29            | -90.04 | -94.62 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |         |                   |        |        |
|--|-------------------------------------|--|---|--|---------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2  | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -100.21 | -90.06            | -89.81 | -94.37 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.43   | -0.45             | -0.45  | -0.50  |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.37   | -0.39             | -0.39  | -0.43  |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | -12.27  | -12.90            | -12.90 | -14.35 |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01   | -0.01             | -0.01  | -0.01  |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -0.41   | -0.43             | -0.43  | -0.47  |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.41   | -0.43             | -0.43  | -0.47  |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19   | -0.20             | -0.20  | -0.22  |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.76   | -0.80             | -0.80  | -0.89  |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -1.49   | -1.57             | -1.57  | -1.75  |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.74   | -0.78             | -0.78  | -0.87  |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00    | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.31   | -0.33             | -0.33  | -0.36  |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00    | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.01   | -0.01             | -0.01  | -0.01  |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.62   | -0.65             | -0.65  | -0.72  |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.33    | 4.95              | 4.99   | 6.47   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 27.24   | 54.87             | 55.27  | 71.05  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 82.92   | 175.24            | 176.58 | 228.54 |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 82.92  | 175.24            | 176.58 | 228.54 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 62.99  | 154.28            | 155.63 | 205.23 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 66.43  | 157.90            | 159.24 | 209.25 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -26.25 | -27.61            | -27.60 | -30.72 |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -27.59 | -29.01            | -29.01 | -32.28 |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -27.57 | -28.99            | -28.99 | -32.26 |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.65              | 0.66   | 0.83   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.52  | -0.55             | -0.55  | -0.61  |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.27  | -0.28             | -0.28  | -0.31  |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.16  | -3.32             | -3.32  | -3.69  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.19  | -0.20             | -0.20  | -0.22  |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.17  | -1.17             | -1.17  | -1.28  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -12.70 | -11.76            | -11.73 | -12.47 |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -12.70 | -11.76            | -11.73 | -12.47 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -11.38 | -10.36            | -10.34 | -10.92 |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -11.38 | -10.36            | -10.34 | -10.92 |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.23  | -0.25             | -0.25  | -0.27  |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -8.76  | -9.18             | -9.18  | -10.20 |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | -5.47  | -5.71             | -5.71  | -6.34  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -7.38  | -7.76             | -7.76  | -8.64  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.73  | -0.76             | -0.76  | -0.85  |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -7.19  | -7.55             | -7.54  | -8.39  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.40              | 0.41   | 0.60   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -2.47  | -2.20             | -2.19  | -2.30  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -10.40 | -10.94            | -10.94 | -12.17 |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -17.60 | -18.51            | -18.51 | -20.60 |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -3.29  | -3.46             | -3.45  | -3.84  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | -3.29  | -3.46             | -3.45  | -3.84  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -3.29  | -3.46             | -3.45  | -3.84  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | -2.39  | -2.51             | -2.51  | -2.79  |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.37  | -0.39             | -0.39  | -0.43  |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | -6.58  | -3.87             | -3.82  | -3.14  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -3.22  | -3.39             | -3.39  | -3.77  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | -3.22  | -3.39             | -3.39  | -3.77  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | -3.77  | -3.96             | -3.96  | -4.41  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 8.26   | 102.43            | 103.87 | 149.70 |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties; South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -9.65  | -10.14            | -10.14 | -11.29 |
| Rocky Mount, NC  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -2.30  | -2.42             | -2.42  | -2.70  |
| Rome, GA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.77  | -0.81             | -0.81  | -0.90  |
| Rosebud County; Lame Deer, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.24  | -0.25             | -0.25  | -0.28  |
| Routt County (part); Steamboat Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.85              | 0.86   | 1.12   |
| Sacramento Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -9.63  | -10.13            | -10.13 | -11.27 |
| Sacramento County, CA  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -9.30  | -9.79             | -9.78  | -10.89 |
| Sacramento Metro, CA   | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -5.54  | 3.62              | 3.77   | 7.63   |
| Sacramento Metro, CA   | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | -5.54  | 3.62              | 3.77   | 7.63   |
| Sacramento, CA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -5.32  | 3.85              | 4.00   | 7.88   |
| Salem Area, OR   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -1.94  | -2.04             | -2.04  | -2.26  |
| Salt Lake City Area, UT  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 12.15  | 22.88             | 23.04  | 29.31  |
| Salt Lake City, UT   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.70   | 14.05             | 14.22  | 19.91  |
| Salt Lake County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 6.17   | 16.60             | 16.75  | 22.32  |
| Salt Lake County, UT   | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 6.17   | 16.60             | 16.75  | 22.32  |
| San Bernardino County (part); excluding Searles Valley Planning area and South Coast Air Basin, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -3.99  | -4.19             | -4.19  | -4.66  |
| San Diego Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -25.21 | -26.51            | -26.50 | -29.50 |
| San Diego County, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -25.24 | -26.55            | -26.54 | -29.54 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -25.23 | -26.54            | -26.53 | -29.53 |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 93.82  | 208.24            | 209.91 | 273.47 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 94.08  | 208.51            | 210.18 | 273.78 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 93.82  | 208.24            | 209.91 | 273.47 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 98.10  | 212.74            | 214.41 | 278.48 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -28.57 | -26.45            | -26.39 | -28.07 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -28.57 | -26.45            | -26.39 | -28.07 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | -28.57 | -26.45            | -26.39 | -28.07 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -28.56 | -26.45            | -26.39 | -28.06 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -28.56 | -26.45            | -26.39 | -28.06 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.74   | 1.36              | 1.37   | 1.73   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.05  | -0.05             | -0.05  | -0.05  |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.07  | -0.08             | -0.08  | -0.09  |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -0.37  | -0.39             | -0.39  | -0.43  |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -6.89  | -7.24             | -7.24  | -8.06  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -1.92  | -2.02             | -2.02  | -2.24  |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -20.29 | -21.06            | -21.06 | -23.33 |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -2.92  | -2.79             | -2.78  | -2.99  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.95  | -1.00             | -1.00  | -1.11  |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | -0.95  | -1.00             | -1.00  | -1.11  |

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.20  | -0.21             | -0.21  | -0.23  |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.38  |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | -0.32  | -0.34             | -0.34  | -0.37  |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -0.12  | -0.12             | -0.12  | -0.14  |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -3.73  | -3.92             | -3.92  | -4.37  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.09  | -0.10             | -0.10  | -0.11  |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | -2.13  | -2.24             | -2.24  | -2.49  |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | -2.19  | -2.31             | -2.31  | -2.57  |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | -7.97  | -8.39             | -8.39  | -9.33  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -1.30  | -1.37             | -1.37  | -1.52  |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 59.90  | 108.93            | 109.62 | 138.71 |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | -6.39  | -6.72             | -6.71  | -7.47  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 11.63  | 37.70             | 38.09  | 51.66  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 11.80  | 37.88             | 38.27  | 51.86  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 11.80  | 37.88             | 38.27  | 51.86  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | -1.61  | -1.69             | -1.69  | -1.88  |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | -0.52  | -0.55             | -0.55  | -0.61  |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.79  | -0.73             | -0.73  | -0.78  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | -0.79  | -0.73             | -0.73  | -0.78  |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | -0.79  | -0.73             | -0.73  | -0.78  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.53  | -2.58             | -2.58  | -2.84  |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | -0.04  | 0.01              | 0.01   | 0.03   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.07  | -4.26             | -4.26  | -4.74  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.17  | -0.17             | -0.17  | -0.19  |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.07   | 0.90              | 0.91   | 1.31   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.83   | 1.70              | 1.71   | 2.20   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.73  | -0.77             | -0.77  | -0.86  |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | -0.54  | -0.57             | -0.57  | -0.63  |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.74  | 60.00             | 60.42  | 77.31  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | -0.04  | -0.04             | -0.04  | -0.05  |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.67  | -0.71             | -0.71  | -0.79  |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -6.38  | -6.71             | -6.70  | -7.46  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | -0.31  | -0.32             | -0.32  | -0.36  |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.17  | -0.13             | -0.12  | -0.12  |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | -2.47  | -2.20             | -2.19  | -2.30  |



**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.02  | -2.13             | -2.13  | -2.37  |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 116.93 | 216.64            | 218.06 | 276.75 |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -5.51  | -5.78             | -5.78  | -6.43  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.90              | 0.91   | 1.31   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | -0.03  | -0.03             | -0.03  | -0.03  |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | -0.41  | -0.44             | -0.44  | -0.48  |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.97   | 14.50             | 14.59  | 18.46  |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.89   | 14.43             | 14.53  | 18.40  |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.87   | 14.42             | 14.51  | 18.38  |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -4.95  | -5.20             | -5.20  | -5.79  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -36.47 | -38.35            | -38.35 | -42.68 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -36.41 | -38.28            | -38.28 | -42.60 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -35.84 | -37.69            | -37.68 | -41.94 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -2.36  | -2.48             | -2.48  | -2.76  |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | -0.75  | -0.79             | -0.79  | -0.88  |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.03   | 9.77              | 9.83   | 12.57  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.66  | -0.70             | -0.70  | -0.78  |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 21.03  | 39.55             | 39.81  | 50.65  |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 21.03  | 39.55             | 39.81  | 50.65  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-84. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Diesel Particulate Matter (DPM) 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | -2.77  | -2.91             | -2.91  | -3.24  |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -1.82  | -1.91             | -1.91  | -2.13  |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | -0.33  | -0.35             | -0.35  | -0.39  |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | -0.86  | -0.91             | -0.91  | -1.01  |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -3.60  | -3.78             | -3.78  | -4.21  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | -2.77  | -2.92             | -2.91  | -3.24  |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | -6.90  | -7.26             | -7.26  | -8.08  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | -1.44  | -1.51             | -1.51  | -1.68  |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | -1.22  | -1.28             | -1.28  | -1.42  |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | 0.00   |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | 0.00   |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -0.01  | 0.00              | 0.00   | 0.00   |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | 0.00              | 0.00   | 0.00   |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.03   |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.03   |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.01              | 0.01   | 0.03   |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.01              | 0.01   | 0.03   |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.03   |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | -0.01  | -0.01  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | -0.02  | -0.03             | -0.03  | -0.03  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.04  | -0.05             | -0.05  | -0.05  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.04  | -0.05             | -0.05  | -0.05  |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.01              | 0.02   | 0.03   |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | -0.02  | -0.02             | -0.02  | -0.02  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.04   | 0.05              | 0.06   | 0.07   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | -0.01  | -0.01             | -0.01  | -0.01  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-85. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2018**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.05   | 8.63              | 8.63   | 11.23  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.12   | 7.31              | 7.31   | 9.51   |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 2.50   | 3.58              | 3.58   | 4.65   |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.89   | 1.27              | 1.27   | 1.66   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.40              | 0.40   | 0.53   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.23   | 3.18              | 3.18   | 4.13   |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.77   | 3.96              | 3.96   | 5.15   |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.77   | 3.96              | 3.96   | 5.15   |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.75              | 0.75   | 0.97   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 0.42   | 0.60              | 0.60   | 0.79   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.02   | 1.45              | 1.45   | 1.89   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 12.08  | 17.31             | 17.42  | 22.70  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.80   | 1.15              | 1.15   | 1.49   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.26   | 0.37              | 0.37   | 0.48   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.45   | 3.50              | 3.50   | 4.55   |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.49   | 3.56              | 3.56   | 4.63   |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.10   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 27.05  | 38.63             | 38.62  | 50.22  |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 24.68  | 35.25             | 35.24  | 45.82  |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 27.07  | 38.66             | 38.65  | 50.26  |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.24   | 3.24              | 3.32   | 4.35   |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.02  | 17.16             | 17.16  | 22.31  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 11.84  | 16.90             | 16.90  | 21.97  |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.02  | 17.16             | 17.16  | 22.31  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 3.68   | 5.26              | 5.26   | 6.84   |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.68   | 5.26              | 5.26   | 6.84   |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 2.92   | 4.25              | 4.43   | 5.84   |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.22   | 1.74              | 1.74   | 2.26   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.10   | 0.15              | 0.15   | 0.19   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.48              | 0.48   | 0.63   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.09   | 7.27              | 7.26   | 9.45   |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.10   | 7.28              | 7.28   | 9.46   |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.10   | 7.28              | 7.28   | 9.46   |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.25   | 1.78              | 1.78   | 2.31   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 2.95   | 4.21              | 4.21   | 5.47   |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 21.89  | 31.26             | 31.25  | 40.64  |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 3.09   | 4.42              | 4.42   | 5.74   |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 4.10   | 5.85              | 5.85   | 7.61   |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.24   | 0.35              | 0.35   | 0.45   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.27   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 1.55   | 2.21              | 2.21   | 2.88   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.23   | 0.33              | 0.33   | 0.42   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.87   | 1.24              | 1.24   | 1.62   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.12   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.72   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.72   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.47   | 2.10              | 2.10   | 2.72   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.07   | 7.24              | 7.24   | 9.42   |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 10.48  | 14.96             | 14.95  | 19.45  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 10.15  | 14.49             | 14.48  | 18.83  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.40   | 3.43              | 3.43   | 4.46   |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 26.53  | 37.88             | 37.88  | 49.27  |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 26.53  | 37.88             | 37.88  | 49.27  |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.03  | 38.61             | 38.61  | 50.21  |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.44   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.40   | 13.42             | 13.42  | 17.45  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.50   | 13.57             | 13.57  | 17.64  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 9.09   | 12.98             | 12.97  | 16.87  |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 6.31   | 9.01              | 9.00   | 11.71  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.23   | 1.75              | 1.75   | 2.28   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.05   | 1.50              | 1.50   | 1.95   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.78   | 5.40              | 5.40   | 7.02   |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 11.87  | 16.95             | 16.94  | 22.03  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.86  | 16.93             | 16.93  | 22.01  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.92  | 15.59             | 15.59  | 20.27  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 10.81  | 15.44             | 15.43  | 20.07  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.31   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.15   | 3.07              | 3.07   | 3.99   |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.41   | 12.01             | 12.00  | 15.61  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 8.41   | 12.01             | 12.00  | 15.61  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.59   | 10.84             | 10.84  | 14.09  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.53   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.91   | 4.15              | 4.15   | 5.39   |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.76   | 5.38              | 5.37   | 6.99   |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 30.02  | 42.87             | 42.86  | 55.74  |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 30.64  | 43.75             | 43.74  | 56.88  |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.07   | 7.24              | 7.23   | 9.41   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.39   | 6.27              | 6.27   | 8.15   |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 10.21  | 14.60             | 14.63  | 19.03  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.33  | 19.05             | 19.07  | 24.82  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.33  | 19.05             | 19.07  | 24.82  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.51   | 10.88             | 11.23  | 14.75  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.12   | 3.18              | 3.53   | 4.73   |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.30  | 30.57             | 30.91  | 40.34  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.88  | 29.97             | 30.31  | 39.56  |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 20.88  | 29.97             | 30.31  | 39.56  |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.44   | 0.63              | 0.63   | 0.82   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 0.36   | 0.55              | 0.63   | 0.85   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.75   | 2.50              | 2.51   | 3.26   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.11   | 0.15              | 0.16   | 0.21   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.99   | 1.41              | 1.41   | 1.83   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.90   | 1.29              | 1.29   | 1.67   |



**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.17   | 1.67              | 1.67   | 2.17   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 1.49   | 2.13              | 2.13   | 2.77   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.12   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.15   | 0.21              | 0.21   | 0.27   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 2.75   | 3.92              | 3.92   | 5.10   |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.48   | 0.68              | 0.68   | 0.89   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 1.82   | 2.60              | 2.60   | 3.38   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 0.84   | 1.20              | 1.20   | 1.56   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 1.86   | 2.65              | 2.65   | 3.44   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.14   | 0.18   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.29   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 2.23   | 3.18              | 3.18   | 4.14   |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.74   | 5.34              | 5.33   | 6.94   |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 6.78   | 9.68              | 9.68   | 12.59  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 6.77   | 9.67              | 9.67   | 12.58  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 1.54   | 2.20              | 2.20   | 2.86   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.17   | 0.25              | 0.25   | 0.32   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.26   | 0.37              | 0.37   | 0.47   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.80   | 6.85              | 6.85   | 8.91   |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.31   | 4.73              | 4.73   | 6.14   |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.46   | 0.66              | 0.66   | 0.85   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.90   | 5.57              | 5.56   | 7.24   |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.66   | 5.22              | 5.22   | 6.79   |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.12   | 7.31              | 7.31   | 9.50   |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.51   | 6.43              | 6.43   | 8.37   |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.94   | 1.34              | 1.34   | 1.74   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.11   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 22.91  | 32.75             | 32.84  | 42.75  |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.89  | 32.73             | 32.82  | 42.72  |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.82   | 1.17              | 1.17   | 1.52   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 1.50   | 2.14              | 2.14   | 2.79   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.83   | 1.19              | 1.19   | 1.55   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 1.03   | 1.47              | 1.46   | 1.90   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 1.03   | 1.47              | 1.46   | 1.90   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 1.02   | 1.45              | 1.45   | 1.89   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.54              | 0.63   | 0.85   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 10.11  | 14.44             | 14.43  | 18.77  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 7.80   | 11.14             | 11.14  | 14.48  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.95   | 2.78              | 2.78   | 3.62   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.03   | 0.04              | 0.04   | 0.06   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.41   | 0.59              | 0.59   | 0.77   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.40   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.74   | 1.06              | 1.06   | 1.38   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.78   | 1.12              | 1.12   | 1.46   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 0.78   | 1.12              | 1.12   | 1.46   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.21   | 0.30              | 0.30   | 0.39   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 0.60   | 0.86              | 0.86   | 1.12   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.24   | 0.34              | 0.34   | 0.44   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.46   | 0.65              | 0.65   | 0.85   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.82   | 4.03              | 4.03   | 5.24   |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.48   | 10.68             | 10.68  | 13.89  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 0.58   | 0.82              | 0.82   | 1.07   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.60   | 0.89              | 0.98   | 1.31   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.60   | 0.89              | 0.98   | 1.31   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.09   | 0.14              | 0.14   | 0.18   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.16   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.07   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.38              | 0.38   | 0.49   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.26   | 0.38              | 0.38   | 0.49   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.01   | 7.15              | 7.15   | 9.30   |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.04   | 4.34              | 4.34   | 5.64   |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.98   | 5.68              | 5.68   | 7.39   |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.98   | 5.68              | 5.68   | 7.39   |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.88   | 1.26              | 1.26   | 1.64   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 1.09   | 1.55              | 1.55   | 2.02   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.28   | 1.82              | 1.82   | 2.37   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.22   | 0.29   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.71   | 1.02              | 1.02   | 1.32   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.14   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.08   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 2.08   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.08   | 2.98              | 2.98   | 3.87   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.08   | 2.98              | 2.98   | 3.87   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.29              | 1.29   | 1.67   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.58   | 3.68              | 3.68   | 4.79   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 6.29   | 8.98              | 8.98   | 11.68  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.37   | 9.09              | 9.09   | 11.82  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.87              | 0.88   | 1.15   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.64   | 0.91              | 0.92   | 1.20   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.05   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.68   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.55   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 61.33  | 87.77             | 88.18  | 114.85 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.95   | 7.26              | 7.69   | 10.18  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 4.95   | 7.26              | 7.69   | 10.18  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 61.38  | 87.84             | 88.25  | 114.94 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 61.38  | 87.83             | 88.24  | 114.93 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 61.37  | 87.82             | 88.23  | 114.91 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 61.37  | 87.83             | 88.24  | 114.92 |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 61.33  | 87.77             | 88.18  | 114.85 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.05   | 7.21              | 7.20   | 9.37   |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.87   | 6.95              | 6.95   | 9.03   |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.35   | 1.93              | 1.95   | 2.54   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.95   | 1.36              | 1.36   | 1.77   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.95   | 1.36              | 1.36   | 1.77   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.58   | 2.47              | 2.98   | 4.08   |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.65   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 14.49  | 20.70             | 20.69  | 26.91  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.46   | 0.66              | 0.66   | 0.86   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.33   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.09   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.68   | 2.40              | 2.40   | 3.12   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.27   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.38   | 0.54              | 0.54   | 0.71   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.57   | 5.09              | 5.10   | 6.63   |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 4.12   | 5.88              | 5.89   | 7.66   |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 4.85   | 6.93              | 6.94   | 9.02   |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.05   | 0.08              | 0.08   | 0.10   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 6.63   | 9.47              | 9.47   | 12.31  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.77   | 6.81              | 6.81   | 8.85   |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.62  | 18.07             | 18.18  | 23.69  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.36   | 0.52              | 0.52   | 0.67   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.50              | 0.50   | 0.64   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.79   | 1.13              | 1.12   | 1.46   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.54              | 0.54   | 0.70   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.21              | 0.21   | 0.27   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.00   | 0.00              | 0.00   | 0.00   |



**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.16   | 0.22              | 0.22   | 0.29   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.68   | 0.97              | 0.97   | 1.26   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.03   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.08   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.11              | 0.11   | 0.15   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.75   | 1.06              | 1.06   | 1.38   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.30   | 0.43              | 0.43   | 0.56   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.41   | 10.58             | 10.58  | 13.76  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.59   | 0.84              | 0.84   | 1.10   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.84              | 0.84   | 1.09   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.45   | 4.92              | 4.92   | 6.40   |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 2.24   | 3.20              | 3.19   | 4.15   |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 63.31  | 90.41             | 90.39  | 117.54 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 35.17  | 50.22             | 50.21  | 65.29  |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 63.56  | 90.76             | 90.74  | 118.00 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 63.37  | 90.49             | 90.46  | 117.64 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 63.31  | 90.41             | 90.39  | 117.54 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.22   | 0.31              | 0.31   | 0.40   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 6.44   | 9.20              | 9.20   | 11.96  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.21   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.58              | 0.58   | 0.76   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.79   | 1.12              | 1.12   | 1.46   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.39   | 0.56              | 0.56   | 0.73   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.01              | 0.01   | 0.01   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.40   | 0.57              | 0.57   | 0.74   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.75   | 5.36              | 5.38   | 7.00   |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 16.98  | 24.26             | 24.27  | 31.56  |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.98  | 24.26             | 24.27  | 31.56  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 27.44  | 39.19             | 39.19  | 50.97  |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.59  | 36.55             | 36.56  | 47.55  |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 13.88  | 19.82             | 19.81  | 25.77  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.55  | 20.78             | 20.78  | 27.02  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.54  | 20.77             | 20.76  | 27.00  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.01   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.25   | 0.35              | 0.35   | 0.46   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.15              | 0.15   | 0.20   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.59   | 2.28              | 2.28   | 2.96   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.78   | 1.11              | 1.11   | 1.44   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 7.79   | 11.13             | 11.13  | 14.47  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 7.79   | 11.13             | 11.13  | 14.47  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.08   | 10.12             | 10.11  | 13.15  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.08   | 10.12             | 10.11  | 13.15  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.12   | 0.18              | 0.18   | 0.23   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 4.61   | 6.58              | 6.58   | 8.55   |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.91   | 4.16              | 4.16   | 5.41   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.89   | 5.55              | 5.55   | 7.22   |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.36   | 0.52              | 0.52   | 0.67   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.79   | 5.42              | 5.42   | 7.04   |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.29   | 0.41              | 0.41   | 0.54   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.58   | 2.25              | 2.25   | 2.93   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 5.48   | 7.83              | 7.83   | 10.18  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.26   | 13.22             | 13.22  | 17.19  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.73   | 2.47              | 2.47   | 3.22   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 1.31   | 1.87              | 1.87   | 2.43   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.20              | 0.20   | 0.26   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 5.58   | 7.96              | 7.96   | 10.35  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 1.80   | 2.57              | 2.57   | 3.34   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 2.10   | 3.00              | 3.00   | 3.90   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 61.07  | 87.40             | 87.81  | 114.36 |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 5.08   | 7.26              | 7.25   | 9.43   |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.21   | 1.73              | 1.73   | 2.25   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.40   | 0.58              | 0.58   | 0.75   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.09              | 0.09   | 0.11   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.12   | 0.17              | 0.17   | 0.22   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 5.34   | 7.63              | 7.63   | 9.92   |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.90   | 7.00              | 7.00   | 9.10   |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.39   | 13.41             | 13.41  | 17.44  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 9.39   | 13.41             | 13.41  | 17.44  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.23   | 13.18             | 13.18  | 17.14  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.98   | 1.40              | 1.40   | 1.82   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.63   | 0.89              | 0.89   | 1.16   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.27   | 8.96              | 8.95   | 11.64  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 3.71   | 5.30              | 5.30   | 6.89   |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 3.71   | 5.30              | 5.30   | 6.89   |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 2.43   | 3.47              | 3.47   | 4.51   |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 13.27  | 18.95             | 18.94  | 24.63  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 13.30  | 18.99             | 18.99  | 24.69  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.28  | 18.96             | 18.96  | 24.66  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 26.00  | 37.13             | 37.13  | 48.29  |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 25.87  | 36.94             | 36.94  | 48.05  |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 26.00  | 37.13             | 37.13  | 48.29  |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 23.77  | 33.95             | 33.96  | 44.16  |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 17.61  | 25.19             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.61  | 25.19             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 17.61  | 25.19             | 25.26  | 32.89  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.61  | 25.18             | 25.26  | 32.88  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 17.61  | 25.18             | 25.26  | 32.88  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.05              | 0.05   | 0.06   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.06              | 0.06   | 0.07   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.18   | 0.26              | 0.26   | 0.34   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.63   | 5.19              | 5.18   | 6.74   |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 1.01   | 1.44              | 1.44   | 1.87   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 10.90  | 15.57             | 15.57  | 20.24  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.77   | 2.53              | 2.53   | 3.28   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 0.50   | 0.71              | 0.71   | 0.93   |

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.10   | 0.14              | 0.14   | 0.19   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.17   | 0.24              | 0.24   | 0.32   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.16   | 0.23              | 0.23   | 0.30   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.97   | 2.81              | 2.81   | 3.65   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 1.15   | 1.65              | 1.64   | 2.14   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.19   | 1.69              | 1.69   | 2.20   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 4.20   | 6.00              | 6.00   | 7.80   |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.64   | 0.92              | 0.92   | 1.19   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.14   | 0.22              | 0.24   | 0.33   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.49   | 4.98              | 4.98   | 6.48   |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 12.81  | 18.51             | 19.01  | 24.93  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 12.72  | 18.38             | 18.89  | 24.77  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 12.72  | 18.38             | 18.89  | 24.77  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 0.85   | 1.21              | 1.21   | 1.57   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.25   | 0.36              | 0.36   | 0.47   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.69              | 0.69   | 0.89   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.71   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.15   | 3.07              | 3.07   | 3.99   |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.17   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.23   | 0.32              | 0.32   | 0.42   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.40   | 0.58              | 0.58   | 0.75   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.28   | 0.41              | 0.41   | 0.53   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.89   | 4.14              | 4.15   | 5.40   |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.34   | 0.49              | 0.49   | 0.63   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.35   | 4.78              | 4.78   | 6.22   |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.16              | 0.16   | 0.20   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.13   | 0.18              | 0.18   | 0.24   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.58   | 2.25              | 2.25   | 2.93   |



**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.07   | 1.53              | 1.53   | 1.98   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 4.09   | 6.02              | 6.46   | 8.57   |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 2.91   | 4.16              | 4.16   | 5.41   |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.12              | 0.12   | 0.15   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.53   | 0.76              | 0.76   | 0.99   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.32              | 0.32   | 0.41   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.10              | 0.10   | 0.13   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.09   | 0.13              | 0.13   | 0.16   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.61   | 3.72              | 3.72   | 4.84   |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.22  | 27.44             | 27.43  | 35.67  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 19.18  | 27.39             | 27.38  | 35.61  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.88  | 26.96             | 26.96  | 35.06  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.30   | 1.85              | 1.85   | 2.41   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.37   | 0.53              | 0.53   | 0.69   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.24   | 1.93              | 2.28   | 3.11   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.33   | 0.47              | 0.47   | 0.60   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.93   | 1.33              | 1.32   | 1.72   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 0.93   | 1.33              | 1.32   | 1.72   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-86. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2025**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.72   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.89   | 1.27              | 1.26   | 1.64   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.15   | 0.22              | 0.22   | 0.29   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.45   | 0.64              | 0.64   | 0.84   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 1.90   | 2.71              | 2.71   | 3.52   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 1.46   | 2.09              | 2.09   | 2.71   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.64   | 5.19              | 5.19   | 6.75   |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.75   | 1.07              | 1.07   | 1.39   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.65   | 0.93              | 0.93   | 1.21   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.08   | 5.03              | 5.02   | 5.97   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 19.72  | 24.28             | 24.28  | 28.87  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 16.69  | 20.56             | 20.55  | 24.44  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 8.17   | 10.06             | 10.05  | 11.96  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.91   | 3.58              | 3.58   | 4.26   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.05   | 1.30              | 1.30   | 1.54   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.78   | 0.96              | 0.96   | 1.14   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 7.26   | 8.94              | 8.94   | 10.63  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 9.04   | 11.13             | 11.13  | 13.23  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.04   | 11.13             | 11.13  | 13.23  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.74   | 2.14              | 2.14   | 2.55   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.70   | 2.10              | 2.10   | 2.49   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.35   | 1.67              | 1.66   | 1.98   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.87   | 1.07              | 1.07   | 1.27   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.32   | 4.09              | 4.08   | 4.86   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 39.32  | 48.95             | 49.00  | 58.43  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.62   | 3.23              | 3.23   | 3.84   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.84   | 1.04              | 1.04   | 1.23   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 7.99   | 9.84              | 9.84   | 11.70  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.13   | 10.01             | 10.01  | 11.90  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 88.21  | 108.64            | 108.60 | 129.14 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 80.48  | 99.12             | 99.09  | 117.82 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 88.28  | 108.73            | 108.69 | 129.24 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.70   | 0.87              | 0.87   | 1.03   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 7.27   | 9.34              | 9.39   | 11.28  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 39.20  | 48.27             | 48.26  | 57.38  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 38.61  | 47.56             | 47.54  | 56.53  |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 39.20  | 48.27             | 48.26  | 57.38  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 11.99  | 14.80             | 14.80  | 17.60  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 11.99  | 14.80             | 14.80  | 17.60  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 9.37   | 12.40             | 12.51  | 15.14  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.24              | 0.24   | 0.29   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.60   | 0.74              | 0.74   | 0.88   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.97   | 4.89              | 4.88   | 5.81   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.34   | 0.42              | 0.42   | 0.50   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.08   | 1.33              | 1.33   | 1.58   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.59  | 20.44             | 20.43  | 24.29  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 16.61  | 20.46             | 20.46  | 24.32  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 16.61  | 20.46             | 20.46  | 24.32  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.08   | 5.03              | 5.02   | 5.97   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 9.70   | 11.94             | 11.94  | 14.19  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 71.43  | 87.97             | 87.94  | 104.57 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 10.10  | 12.43             | 12.43  | 14.78  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.05   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 13.36  | 16.45             | 16.44  | 19.55  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.79   | 0.98              | 0.98   | 1.16   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.48   | 0.59              | 0.58   | 0.70   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.39   |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.39   |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 5.04   | 6.22              | 6.22   | 7.39   |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 0.74   | 0.92              | 0.92   | 1.09   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.84   | 3.50              | 3.50   | 4.16   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.79   | 5.89              | 5.89   | 7.01   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.79   | 5.89              | 5.89   | 7.01   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 4.79   | 5.89              | 5.89   | 7.01   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.54  | 20.37             | 20.36  | 24.21  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 34.24  | 42.18             | 42.16  | 50.13  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 33.21  | 40.90             | 40.88  | 48.61  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.84   | 9.66              | 9.65   | 11.48  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 86.54  | 106.63            | 106.59 | 126.76 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 86.54  | 106.63            | 106.59 | 126.76 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 88.20  | 108.68            | 108.64 | 129.20 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.56   | 3.16              | 3.16   | 3.75   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.19   | 1.46              | 1.46   | 1.74   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.56   | 3.16              | 3.16   | 3.75   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.54   | 3.13              | 3.13   | 3.72   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 30.66  | 37.76             | 37.74  | 44.88  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 30.99  | 38.16             | 38.15  | 45.36  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 29.63  | 36.49             | 36.48  | 43.38  |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 20.61  | 25.38             | 25.37  | 30.17  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.00   | 4.93              | 4.92   | 5.85   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.42   | 4.22              | 4.22   | 5.01   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.34  | 15.20             | 15.19  | 18.06  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 38.71  | 47.68             | 47.66  | 56.67  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 38.68  | 47.63             | 47.62  | 56.62  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 35.60  | 43.84             | 43.83  | 52.11  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 35.26  | 43.43             | 43.41  | 51.62  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.53   | 0.66              | 0.65   | 0.78   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.04   | 8.66              | 8.66   | 10.30  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 27.42  | 33.77             | 33.75  | 40.14  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 27.42  | 33.77             | 33.75  | 40.14  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 24.75  | 30.48             | 30.47  | 36.23  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.93   | 1.15              | 1.15   | 1.36   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.05   | 1.29              | 1.29   | 1.53   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 9.30   | 11.45             | 11.45  | 13.62  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 12.28  | 15.13             | 15.12  | 17.98  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 97.90  | 120.57            | 120.53 | 143.32 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 99.91  | 123.04            | 123.00 | 146.26 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.52  | 20.35             | 20.34  | 24.18  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 14.31  | 17.63             | 17.62  | 20.95  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 33.29  | 41.15             | 41.16  | 48.98  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.46  | 53.67             | 53.67  | 63.86  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.46  | 53.67             | 53.67  | 63.86  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 22.80  | 29.68             | 29.88  | 36.03  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 7.10   | 10.35             | 10.56  | 13.06  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 69.20  | 86.83             | 87.01  | 103.96 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 67.83  | 85.14             | 85.33  | 101.96 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 67.83  | 85.14             | 85.33  | 101.96 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.44   | 0.54              | 0.54   | 0.64   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.48   | 0.60              | 0.60   | 0.71   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.16   | 0.19              | 0.19   | 0.23   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.55   | 1.91              | 1.91   | 2.27   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.21   | 0.26              | 0.26   | 0.31   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.04   | 1.66              | 1.71   | 2.16   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.56   | 6.88              | 6.88   | 8.19   |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.31   | 0.41              | 0.41   | 0.50   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 3.22   | 3.97              | 3.96   | 4.71   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.01   | 3.71              | 3.70   | 4.41   |



**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 3.82   | 4.70              | 4.70   | 5.59   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 4.89   | 6.03              | 6.03   | 7.16   |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.71   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.08   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 8.95   | 11.02             | 11.02  | 13.10  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.54   | 1.90              | 1.90   | 2.26   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.94   | 7.31              | 7.31   | 8.69   |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 2.74   | 3.38              | 3.37   | 4.01   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 6.05   | 7.45              | 7.45   | 8.86   |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.52   | 0.64              | 0.64   | 0.76   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 7.19   | 8.86              | 8.86   | 10.53  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 12.19  | 15.02             | 15.01  | 17.85  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 22.07  | 27.19             | 27.18  | 32.32  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 22.07  | 27.18             | 27.17  | 32.30  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 5.02   | 6.18              | 6.18   | 7.35   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.57   | 0.70              | 0.70   | 0.83   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.83   | 1.03              | 1.03   | 1.22   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 15.65  | 19.28             | 19.27  | 22.92  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 10.79  | 13.29             | 13.29  | 15.80  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.23   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.50   | 1.85              | 1.85   | 2.20   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 12.71  | 15.65             | 15.65  | 18.61  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.93  | 14.69             | 14.68  | 17.46  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 16.69  | 20.55             | 20.55  | 24.43  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 14.71  | 18.12             | 18.11  | 21.54  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.05   | 3.76              | 3.76   | 4.47   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.20   | 0.25              | 0.25   | 0.29   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 74.61  | 92.34             | 92.37  | 109.98 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 74.57  | 92.29             | 92.32  | 109.92 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68   | 0.83              | 0.83   | 0.99   |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.66   | 3.28              | 3.28   | 3.90   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 4.89   | 6.02              | 6.02   | 7.16   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.49   | 0.60              | 0.60   | 0.72   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.74   | 3.38              | 3.37   | 4.01   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 3.35   | 4.12              | 4.12   | 4.90   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 3.35   | 4.12              | 4.12   | 4.90   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 3.33   | 4.10              | 4.10   | 4.87   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.02   | 1.64              | 1.69   | 2.13   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.22   | 1.50              | 1.50   | 1.78   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 32.96  | 40.59             | 40.58  | 48.25  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 25.43  | 31.33             | 31.31  | 37.23  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 6.20   | 7.63              | 7.63   | 9.08   |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.10   | 0.13              | 0.13   | 0.15   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.35   | 1.67              | 1.67   | 1.98   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.70   | 0.87              | 0.86   | 1.03   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 2.48   | 3.06              | 3.06   | 3.64   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 2.55   | 3.15              | 3.14   | 3.74   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 2.55   | 3.15              | 3.14   | 3.74   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.68   | 0.84              | 0.84   | 1.00   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 1.96   | 2.42              | 2.42   | 2.88   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.79   | 0.98              | 0.98   | 1.16   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.49   | 1.83              | 1.83   | 2.18   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.62   | 1.99              | 1.99   | 2.37   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.62   | 1.99              | 1.99   | 2.37   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.17   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.21   | 11.34             | 11.34  | 13.48  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.39  | 30.04             | 30.03  | 35.71  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 1.88   | 2.31              | 2.31   | 2.75   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.74   | 2.52              | 2.57   | 3.18   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.74   | 2.52              | 2.57   | 3.18   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.31   | 0.38              | 0.38   | 0.45   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.97   | 1.20              | 1.20   | 1.43   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.97   | 1.19              | 1.19   | 1.42   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.05   | 1.29              | 1.29   | 1.54   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.33  | 20.11             | 20.10  | 23.91  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 9.92   | 12.22             | 12.21  | 14.52  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 12.97  | 15.98             | 15.97  | 18.99  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 12.97  | 15.98             | 15.97  | 18.99  |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.89   | 3.55              | 3.55   | 4.22   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.92   | 1.14              | 1.14   | 1.35   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 3.55   | 4.37              | 4.37   | 5.19   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.01   | 4.94              | 4.94   | 5.88   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.49   | 0.61              | 0.61   | 0.72   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.13   | 2.63              | 2.62   | 3.12   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.12   | 0.15              | 0.15   | 0.18   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.33   | 0.41              | 0.41   | 0.48   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 6.80   | 8.37              | 8.37   | 9.95   |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 6.80   | 8.37              | 8.37   | 9.95   |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.80   | 8.37              | 8.37   | 9.95   |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.80   | 8.37              | 8.37   | 9.95   |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.01   | 3.71              | 3.70   | 4.41   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 8.41   | 10.35             | 10.35  | 12.31  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 20.55  | 25.32             | 25.31  | 30.09  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 20.78  | 25.60             | 25.59  | 30.43  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.58              | 0.58   | 0.69   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.01   | 2.52              | 2.53   | 3.02   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.07   | 2.58              | 2.58   | 3.08   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.20   | 1.48              | 1.48   | 1.76   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.99   | 1.22              | 1.22   | 1.46   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.81   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 200.13 | 248.47            | 248.64 | 296.27 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 15.56  | 21.15             | 21.41  | 26.07  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 15.56  | 21.15             | 21.41  | 26.07  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 200.31 | 248.68            | 248.86 | 296.52 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 200.29 | 248.66            | 248.83 | 296.50 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 200.25 | 248.61            | 248.79 | 296.45 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 200.28 | 248.64            | 248.82 | 296.48 |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 200.13 | 248.47            | 248.64 | 296.27 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 16.45  | 20.26             | 20.26  | 24.08  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 15.87  | 19.55             | 19.54  | 23.23  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.36   | 1.67              | 1.67   | 1.99   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.30   | 5.36              | 5.36   | 6.39   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.11   | 3.83              | 3.83   | 4.56   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 3.11   | 3.83              | 3.83   | 4.56   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.73   | 8.14              | 8.45   | 10.77  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.11   | 1.37              | 1.37   | 1.63   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.57   | 1.94              | 1.94   | 2.30   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 47.23  | 58.17             | 58.15  | 69.14  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.80   | 7.14              | 7.14   | 8.49   |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.51   | 1.86              | 1.86   | 2.21   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.59   | 0.72              | 0.72   | 0.86   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.17   | 0.21              | 0.21   | 0.25   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 5.49   | 6.76              | 6.76   | 8.03   |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.68   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.30   | 1.60              | 1.60   | 1.90   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 11.62  | 14.34             | 14.34  | 17.06  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.42  | 16.56             | 16.55  | 19.69  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 15.83  | 19.53             | 19.53  | 23.23  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.20   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 21.63  | 26.64             | 26.63  | 31.67  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 15.56  | 19.16             | 19.15  | 22.77  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 41.10  | 51.15             | 51.20  | 61.05  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.18   | 1.46              | 1.46   | 1.73   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.13   | 1.39              | 1.39   | 1.66   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.45   | 3.01              | 3.01   | 3.58   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.27   | 1.57              | 1.57   | 1.86   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.10   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.45   | 0.55              | 0.55   | 0.66   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.21   | 2.72              | 2.72   | 3.23   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.05   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.14   | 0.17              | 0.17   | 0.21   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.40   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 2.43   | 2.99              | 2.99   | 3.55   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.01   | 1.24              | 1.24   | 1.48   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.16  | 29.76             | 29.75  | 35.37  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.06   | 0.07              | 0.07   | 0.09   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 1.87   | 2.30              | 2.30   | 2.74   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.86   | 2.29              | 2.29   | 2.72   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.25   | 0.31              | 0.31   | 0.37   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 11.23  | 13.83             | 13.83  | 16.44  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.30   | 8.99              | 8.98   | 10.68  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 206.49 | 254.31            | 254.22 | 302.28 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 114.82 | 141.41            | 141.36 | 168.08 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 207.29 | 255.30            | 255.21 | 303.47 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 206.73 | 254.61            | 254.52 | 302.65 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 206.49 | 254.31            | 254.22 | 302.28 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.61   | 0.75              | 0.75   | 0.90   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 21.03  | 25.91             | 25.90  | 30.79  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.71   | 0.88              | 0.88   | 1.05   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 0.88              | 0.88   | 1.05   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.35   | 0.43              | 0.43   | 0.51   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.32   | 1.63              | 1.62   | 1.93   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.57   | 3.16              | 3.16   | 3.76   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.27   | 1.57              | 1.57   | 1.87   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.53   | 0.65              | 0.65   | 0.77   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.09   | 1.34              | 1.34   | 1.60   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.43   | 1.77              | 1.77   | 2.10   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.22  | 15.12             | 15.12  | 18.00  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 55.37  | 68.26             | 68.24  | 81.17  |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 55.37  | 68.26             | 68.24  | 81.17  |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 89.55  | 110.36            | 110.32 | 131.21 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 83.58  | 103.00            | 102.97 | 122.47 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 45.18  | 55.64             | 55.62  | 66.14  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 47.42  | 58.41             | 58.39  | 69.42  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 47.39  | 58.36             | 58.34  | 69.37  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.04   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.84   | 1.04              | 1.04   | 1.24   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.32   | 6.55              | 6.55   | 7.78   |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.48   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.39   | 2.95              | 2.95   | 3.50   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 25.41  | 31.30             | 31.28  | 37.20  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 25.41  | 31.30             | 31.28  | 37.20  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.11  | 28.47             | 28.46  | 33.84  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 23.11  | 28.47             | 28.46  | 33.84  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.40   | 0.49              | 0.49   | 0.59   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 15.08  | 18.57             | 18.56  | 22.07  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 9.49   | 11.69             | 11.68  | 13.89  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.68  | 15.62             | 15.61  | 18.56  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.21   | 1.49              | 1.49   | 1.77   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 12.38  | 15.25             | 15.24  | 18.12  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 0.92   | 1.13              | 1.13   | 1.34   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 5.14   | 6.34              | 6.33   | 7.53   |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.27   | 0.33              | 0.33   | 0.39   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 17.87  | 22.01             | 22.01  | 26.17  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 30.22  | 37.22             | 37.20  | 44.24  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 5.65   | 6.96              | 6.95   | 8.27   |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 5.65   | 6.96              | 6.95   | 8.27   |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 5.65   | 6.96              | 6.95   | 8.27   |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 4.19   | 5.16              | 5.16   | 6.13   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.51   | 0.63              | 0.63   | 0.75   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 18.18  | 22.39             | 22.38  | 26.61  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 5.70   | 7.02              | 7.02   | 8.35   |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 5.70   | 7.02              | 7.02   | 8.35   |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 6.66   | 8.20              | 8.20   | 9.75   |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 199.31 | 247.45            | 247.63 | 295.07 |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 16.57  | 20.41             | 20.40  | 24.26  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.96   | 4.87              | 4.87   | 5.79   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.32   | 1.62              | 1.62   | 1.93   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.30   | 0.37              | 0.37   | 0.44   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.39   | 0.48              | 0.48   | 0.57   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 17.06  | 21.01             | 21.00  | 24.98  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 15.99  | 19.69             | 19.68  | 23.40  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 30.66  | 37.77             | 37.76  | 44.90  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 30.67  | 37.78             | 37.77  | 44.91  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 30.21  | 37.22             | 37.20  | 44.24  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.25   | 4.01              | 4.01   | 4.76   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.95   | 2.40              | 2.40   | 2.85   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 20.48  | 25.23             | 25.22  | 29.99  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 12.10  | 14.90             | 14.89  | 17.71  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 12.10  | 14.90             | 14.89  | 17.71  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 7.43   | 9.16              | 9.16   | 10.89  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 43.28  | 53.30             | 53.29  | 63.36  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 43.37  | 53.41             | 53.39  | 63.49  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 43.32  | 53.36             | 53.34  | 63.42  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 84.84  | 104.54            | 104.51 | 124.29 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 84.42  | 104.02            | 103.99 | 123.67 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 84.84  | 104.54            | 104.51 | 124.29 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 77.54  | 95.55             | 95.52  | 113.60 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 57.59  | 71.31             | 71.34  | 84.95  |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 57.59  | 71.31             | 71.34  | 84.95  |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 57.59  | 71.31             | 71.34  | 84.95  |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 57.58  | 71.30             | 71.33  | 84.93  |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 57.58  | 71.30             | 71.33  | 84.93  |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.11              | 0.11   | 0.13   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.61   | 0.75              | 0.75   | 0.90   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 11.84  | 14.58             | 14.58  | 17.34  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 3.29   | 4.05              | 4.05   | 4.81   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 35.53  | 43.76             | 43.74  | 52.01  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 5.71   | 7.03              | 7.03   | 8.36   |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.63   | 2.00              | 2.00   | 2.38   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 1.63   | 2.00              | 2.00   | 2.38   |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.56   | 0.69              | 0.69   | 0.81   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.54   | 0.66              | 0.66   | 0.79   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 6.41   | 7.90              | 7.89   | 9.38   |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.15   | 0.19              | 0.19   | 0.22   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 3.71   | 4.57              | 4.57   | 5.43   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.82   | 4.71              | 4.71   | 5.60   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 13.70  | 16.87             | 16.87  | 20.06  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 2.15   | 2.65              | 2.65   | 3.15   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.45   | 0.67              | 0.69   | 0.85   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 11.21  | 13.81             | 13.80  | 16.41  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 41.37  | 53.28             | 53.57  | 64.42  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 41.08  | 52.92             | 53.21  | 63.99  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 41.08  | 52.92             | 53.21  | 63.99  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 2.76   | 3.40              | 3.40   | 4.05   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.85   | 1.05              | 1.04   | 1.24   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 1.57   | 1.93              | 1.93   | 2.30   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.66   | 5.74              | 5.74   | 6.83   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.35   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 7.02   | 8.64              | 8.64   | 10.27  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.42   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 1.74   | 2.14              | 2.14   | 2.55   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.63   | 0.78              | 0.78   | 0.93   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.29   | 1.59              | 1.59   | 1.89   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 0.93   | 1.14              | 1.14   | 1.36   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 9.43   | 11.68             | 11.68  | 13.91  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.13   | 1.39              | 1.39   | 1.65   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.02   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.94  | 13.47             | 13.46  | 16.01  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.42   | 0.51              | 0.51   | 0.61   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.42   | 0.52              | 0.52   | 0.62   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 5.14   | 6.34              | 6.33   | 7.53   |



**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.48   | 4.28              | 4.28   | 5.09   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 12.99  | 17.98             | 18.24  | 22.30  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 9.49   | 11.69             | 11.69  | 13.90  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.37   | 0.45              | 0.45   | 0.54   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.74   | 2.14              | 2.14   | 2.55   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.72   | 0.88              | 0.88   | 1.05   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.07              | 0.07   | 0.08   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.28   | 0.34              | 0.34   | 0.41   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 8.50   | 10.46             | 10.46  | 12.44  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 62.66  | 77.18             | 77.15  | 91.74  |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 62.54  | 77.03             | 77.00  | 91.56  |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 61.58  | 75.84             | 75.81  | 90.14  |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 4.15   | 5.11              | 5.11   | 6.08   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.24   | 1.53              | 1.53   | 1.82   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 3.94   | 6.46              | 6.67   | 8.43   |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.10   | 1.36              | 1.36   | 1.62   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.03   | 3.73              | 3.73   | 4.43   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 3.03   | 3.73              | 3.73   | 4.43   |

**Table A-87. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2035**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 4.77   | 5.87              | 5.87   | 6.98   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 2.99   | 3.68              | 3.68   | 4.37   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.53   | 0.66              | 0.66   | 0.78   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 1.48   | 1.82              | 1.82   | 2.16   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 6.18   | 7.62              | 7.61   | 9.05   |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 4.76   | 5.87              | 5.86   | 6.97   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 11.86  | 14.60             | 14.60  | 17.36  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 2.46   | 3.03              | 3.02   | 3.60   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 2.10   | 2.59              | 2.59   | 3.08   |

<sup>a</sup> Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

<sup>b</sup> Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

<sup>c</sup> Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Ada County; Boise, ID  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 5.94   | 7.15              | 7.15   | 8.37   |
| Adams, Denver, and Boulder Counties; Denver Metropolitan area, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 28.58  | 34.43             | 34.42  | 40.31  |
| Ajo, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Albany-Schenectady-Troy, NY  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 24.19  | 29.14             | 29.14  | 34.12  |
| Albuquerque Area, NM   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 11.83  | 14.26             | 14.25  | 16.69  |
| Allegan Co., MI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.22   | 5.08              | 5.08   | 5.95   |
| Allegheny County Air Basin: Hazelwood monitor, PA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.70   | 2.04              | 2.04   | 2.39   |
| Allegheny County; The area including Liberty, Lincoln, Port Vue, and Glassport Boroughs and the City of Clairton, PA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Allegheny, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.79   | 0.95              | 0.95   | 1.11   |
| Allentown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 10.52  | 12.68             | 12.68  | 14.84  |
| Allentown-Bethlehem-Easton, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 13.10  | 15.78             | 15.78  | 18.48  |
| Allentown-Bethlehem-Easton, PA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 13.10  | 15.78             | 15.78  | 18.48  |
| Altoona, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.52   | 3.04              | 3.04   | 3.56   |
| Amador and Calaveras Cos., CA: (Central Moun   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.47   | 2.97              | 2.97   | 3.48   |
| Anchorage Area, AK   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 1.91   | 2.30              | 2.30   | 2.70   |
| Anchorage; Eagle River, AK   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.16   |
| AQCR 012: Portions of Grant County, NM   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.26   | 1.51              | 1.51   | 1.77   |
| AQCR 109-Millinocket, ME   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 4.81   | 5.79              | 5.79   | 6.78   |
| AQCR 131: Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington counties                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 56.93  | 69.41             | 69.41  | 81.52  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| (Minneapolis-St. Paul), MN   |                                     |  |   |  |        |                   |        |        |
| AQCR 237: Brown County: Green Bay sub-city area, WI                                  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.13   | 0.16              | 0.16   | 0.19   |
| AQCR 238: Marathon County: Rothschild Sub-city area, Rib Mountain, Weston, WI        | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 3.80   | 4.58              | 4.58   | 5.36   |
| AQCR 238: Oneida County: Rhinelander Sub-city area, WI                               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.22   | 1.47              | 1.47   | 1.72   |
| AQCR 239: Milwaukee County: Milwaukee sub-city area, WI                              | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.59  | 13.96             | 13.96  | 16.35  |
| AQCR 240: Dane County: Madison sub-city area, WI                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 11.78  | 14.19             | 14.19  | 16.61  |
| Archuleta County; Pagosa Springs, CO   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.44   | 0.53              | 0.53   | 0.63   |
| Armstrong County: Madison Twp, Mahoning Twp, Boggs Twp, Washington Twp, Pine Twp, PA | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Aroostock County; City of Presque Isle, ME   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.32   | 0.39              | 0.39   | 0.46   |
| Atlanta, GA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 127.83 | 153.99            | 153.97 | 180.31 |
| Atlanta, GA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 116.63 | 140.50            | 140.48 | 164.51 |
| Atlanta, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 127.93 | 154.11            | 154.09 | 180.45 |
| Atlantic City Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.01   | 1.22              | 1.22   | 1.43   |
| Bakersfield Area, CA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 10.54  | 13.30             | 13.31  | 15.76  |
| Baltimore Area, MD   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.24   | 0.29              | 0.29   | 0.34   |
| Baltimore, MD  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 56.81  | 68.43             | 68.42  | 80.13  |
| Baltimore, MD  | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 55.99  | 67.45             | 67.44  | 78.97  |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Baltimore, MD                              | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 56.81  | 68.43             | 68.42  | 80.13  |
| Baton Rouge, LA                            | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 17.37  | 20.98             | 20.97  | 24.58  |
| Baton Rouge, LA                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 17.37  | 20.98             | 20.97  | 24.58  |
| Beaumont/Port Arthur, TX                   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 13.51  | 17.62             | 17.64  | 21.04  |
| Beaver, PA                                 | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Benton County; (part) TVA Johnsonville, TN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.87   | 1.05              | 1.05   | 1.23   |
| Benton Harbor, MI                          | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.75   | 6.93              | 6.92   | 8.11   |
| Benzie Co., MI                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.49   | 0.59              | 0.59   | 0.69   |
| Billings Area, MT                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.54   | 1.85              | 1.85   | 2.17   |
| Billings, MT                               | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Birmingham, AL                             | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 24.04  | 28.97             | 28.96  | 33.92  |
| Birmingham, AL                             | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 24.06  | 28.98             | 28.97  | 33.93  |
| Birmingham, AL                             | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 24.06  | 28.98             | 28.97  | 33.93  |
| Boise-Northern Ada County Area, ID         | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 5.94   | 7.15              | 7.15   | 8.37   |
| Bonner County; The Sandpoint Area, ID      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Boston Area, MA                            | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 14.22  | 17.13             | 17.13  | 20.06  |
| Boston-Lawrence-Worcester (E. Mass), MA    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 103.60 | 124.81            | 124.79 | 146.13 |
| Boston-Manchester-Portsmouth (SE), NH      | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 50  | 0  | 14.65  | 17.64             | 17.64  | 20.66  |
| Boyd County (part), KY                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Brooke; Follansbee area, WV                | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Buffalo-Niagara Falls, NY                  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 19.35  | 23.31             | 23.30  | 27.29  |
| Burlington Area, NJ                        | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Calaveras County, CA                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 1.15   | 1.39              | 1.39   | 1.62   |
| Campbell-Clermont Counties, KY-OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.71   | 0.85              | 0.85   | 0.99   |
| Canton-Massillon, OH                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 7.30   | 8.81              | 8.81   | 10.32  |
| Canton-Massillon, OH                | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 7.30   | 8.81              | 8.81   | 10.32  |
| Canton-Massillon, OH                | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 7.30   | 8.81              | 8.81   | 10.32  |
| Cass County, MI                     | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 1.08   | 1.30              | 1.30   | 1.52   |
| Central New Hampshire, NH           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 4.11   | 4.96              | 4.95   | 5.80   |
| Central Steptoe Valley, NV          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Charleston, WV                      | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 6.93   | 8.35              | 8.35   | 9.78   |
| Charleston, WV                      | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 6.93   | 8.35              | 8.35   | 9.78   |
| Charleston, WV                      | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 6.93   | 8.35              | 8.35   | 9.78   |
| Charlotte Area, NC                  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 23.97  | 28.88             | 28.87  | 33.81  |
| Charlotte-Gastonia-Rock Hill, NC-SC | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 49.75  | 59.94             | 59.93  | 70.18  |
| Charlotte-Rock Hill, NC-SC          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 48.31  | 58.20             | 58.19  | 68.14  |
| Chattanooga, AL-TN-GA               | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 11.36  | 13.69             | 13.68  | 16.02  |
| Chicago-Gary-Lake County, IL-IN     | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 125.48 | 151.24            | 151.22 | 177.11 |
| Chicago-Gary-Lake County, IL-IN     | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 125.48 | 151.24            | 151.22 | 177.11 |
| Chicago-Naperville, IL-IN-WI        | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 127.91 | 154.17            | 154.14 | 180.53 |
| Chico (Butte County), CA            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.24   |
| Chico Area, CA                      | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.87   | 2.26              | 2.26   | 2.64   |
| Chico, CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.24   |
| Chico, CA                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 3.70   | 4.46              | 4.46   | 5.22   |
| Cincinnati, OH-KY-IN                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 44.44  | 53.54             | 53.53  | 62.69  |
| Cincinnati-Hamilton, OH-KY-IN       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 44.90  | 54.09             | 54.08  | 63.34  |
| Cincinnati-Hamilton, OH-KY-IN       | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 42.94  | 51.72             | 51.72  | 60.56  |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Clark County; Las Vegas planning area, NV           | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 29.93  | 36.06             | 36.05  | 42.22  |
| Clarkesville-Hopkinsville, TN-KY                    | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.79   | 6.98              | 6.98   | 8.17   |
| Clearfield & Indiana Cos., PA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.96   | 5.98              | 5.98   | 7.00   |
| Cleveland Area, OH                                  | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.92  | 21.59             | 21.58  | 25.28  |
| Cleveland-Akron-Lorain, OH                          | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 56.13  | 67.62             | 67.61  | 79.18  |
| Cleveland-Akron-Lorain, OH                          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 56.08  | 67.56             | 67.55  | 79.11  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 51.57  | 62.13             | 62.12  | 72.75  |
| Cleveland-Akron-Lorain, OH                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 51.13  | 61.60             | 61.59  | 72.12  |
| Cochise County; Paul Spur/Douglas planning area, AZ | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.07   |
| Colorado Springs Area, CO                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.23  | 12.32             | 12.32  | 14.43  |
| Columbus, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 39.73  | 47.86             | 47.85  | 56.04  |
| Columbus, OH  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 39.73  | 47.86             | 47.85  | 56.04  |
| Columbus, OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 35.85  | 43.19             | 43.18  | 50.57  |
| Cook County; Lyons Township, IL                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.35   | 1.63              | 1.63   | 1.91   |
| Cook County; Southeast Chicago, IL                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.33   | 1.61              | 1.61   | 1.88   |
| Coshocton County; Franklin Township, OH             | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Coso Junction, CA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Cuyahoga County (part), OH                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 13.03  | 15.69             | 15.69  | 18.37  |
| Cuyahoga County, OH                                 | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 17.83  | 21.48             | 21.47  | 25.15  |
| Dallas-Fort Worth, TX                               | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 141.87 | 170.90            | 170.87 | 200.11 |
| Dallas-Fort Worth, TX                               | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 144.78 | 174.41            | 174.38 | 204.21 |
| Dayton-Springfield, OH                              | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.94  | 28.84             | 28.84  | 33.77  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Dayton-Springfield, OH                         | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 20.74  | 24.98             | 24.98  | 29.25  |
| Denver-Boulder Area, CO                        | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 48.26  | 58.37             | 58.37  | 68.42  |
| Denver-Boulder-Greeley-Ft Collins-Loveland, CO | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.99  | 76.12             | 76.11  | 89.19  |
| Denver-Boulder-Greeley-Ft. Collins-Love., CO   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.99  | 76.12             | 76.11  | 89.19  |
| Detroit Area, MI                               | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 28.65  | 37.03             | 37.07  | 44.13  |
| Detroit, MI                                    | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 11.64  | 16.54             | 16.58  | 20.14  |
| Detroit-Ann Arbor, MI                          | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 100.15 | 123.17            | 123.20 | 144.99 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 98.17  | 120.78            | 120.81 | 142.19 |
| Detroit-Ann Arbor, MI                          | PM 2.5 (2006 24-hr)                 | Maintenance                                  | 100                                       | 0  | 98.17  | 120.78            | 120.81 | 142.19 |
| Dona Ana County; Anthony, NM                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Door County, WI                                | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.69   | 0.84              | 0.84   | 0.98   |
| Douglas, AZ                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.78   | 0.93              | 0.93   | 1.09   |
| Dukes County, MA                               | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Duluth Area, MN                                | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.49   | 3.00              | 3.00   | 3.51   |
| East Chicago Area, IN                          | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.33   | 0.40              | 0.40   | 0.47   |
| East Helena Area, MT                           | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| East Kern County Area, CA                      | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 1.37   | 2.26              | 2.27   | 2.83   |
| El Paso County, TX                             | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.84   | 9.48              | 9.48   | 11.12  |
| El Paso, TX                                    | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.40   | 0.52              | 0.52   | 0.62   |
| Erie, PA                                       | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 4.67   | 5.62              | 5.62   | 6.58   |
| Essex County (Whiteface Mtn.), NY              | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 0.07   | 0.09              | 0.09   | 0.11   |
| Eugene-Springfield Area, OR                    | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.50   | 5.42              | 5.42   | 6.35   |



**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Evansville, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 5.53   | 6.67              | 6.66   | 7.80   |
| Evansville, IN                                   | PM 2.5 (1997 Annual)       | Maintenance                                  | 100                                       | 0  | 7.22   | 8.70              | 8.70   | 10.19  |
| Fairbanks Area, AK                               | CO (1971 8-hr)             | Maintenance, Serious                         | 100                                       | 0  | 0.22   | 0.27              | 0.27   | 0.32   |
| Fairbanks, AK                                    | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Flathead County; Columbia Falls and vicinity, MT | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Flathead County; Kalispell and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.71   | 0.86              | 0.86   | 1.01   |
| Flathead County; Whitefish and vicinity, MT      | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Flint, MI  | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 12.97  | 15.63             | 15.62  | 18.30  |
| Fort Collins Area, CO                            | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 2.21   | 2.66              | 2.66   | 3.12   |
| Fort Wayne, IN                                   | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 8.60   | 10.36             | 10.36  | 12.14  |
| Franklin Co., PA                                 | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 3.97   | 4.78              | 4.78   | 5.60   |
| Fredericksburg, VA                               | Ozone (1997 8-hr)          | Maintenance, Moderate                        | 50  | 0  | 8.77   | 10.56             | 10.56  | 12.37  |
| Freehold Area, NJ                                | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.55   | 0.66              | 0.66   | 0.77   |
| Fremont County; Canon City Area, CO              | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 0.75   | 0.90              | 0.90   | 1.06   |
| Fresno Area, CA                                  | CO (1971 8-hr)             | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 10.30  | 12.41             | 12.41  | 14.53  |
| Grand Rapids, MI                                 | Ozone (1997 8-hr)          | Maintenance                                  | 100                                       | 0  | 17.68  | 21.30             | 21.29  | 24.94  |
| Grants Pass Area, OR                             | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 0.90   | 1.09              | 1.09   | 1.27   |
| Great Falls Area, MT                             | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Greater Connecticut, CT                          | Ozone (1997 8-hr)          | Nonattainment, Moderate                      | 50  | 0  | 31.92  | 38.45             | 38.45  | 45.03  |
| Greater Connecticut, CT                          | Ozone (2008 8-hr)          | Nonattainment, Marginal                      | 50  | 0  | 31.93  | 38.46             | 38.46  | 45.03  |
| Greeley Area, CO                                 | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 7.27   | 8.76              | 8.76   | 10.26  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Greene Co., IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Greene Co., PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.21   | 1.46              | 1.46   | 1.70   |
| Greensboro, NC  | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 22.69  | 27.33             | 27.33  | 32.00  |
| Greensboro-Winston-Salem-High Point, NC   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 15.64  | 18.84             | 18.84  | 22.06  |
| Hancock and Brooke Counties (Part); The city of Weirton, WV                                     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Hancock County (Part) The city of Weirton, including Butler and Clay: Magisterial Districts, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.23   | 0.27              | 0.27   | 0.32   |
| Hancock, Knox, Lincoln and Waldo Cos., ME   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.18   | 2.63              | 2.63   | 3.08   |
| Harrisburg-Lebanon-Carlisle, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 18.42  | 22.19             | 22.18  | 25.98  |
| Harrisburg-Lebanon-Carlisle, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 17.28  | 20.82             | 20.81  | 24.38  |
| Harrisburg-Lebanon-Carlisle-York, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 24.18  | 29.13             | 29.13  | 34.11  |
| Hartford-New Britain-Middletown Area, CT  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 21.36  | 25.74             | 25.73  | 30.13  |
| Hayden, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.05   | 0.05              | 0.05   | 0.06   |
| Hayden, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Hayden, AZ  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.04   | 0.05              | 0.05   | 0.06   |
| Haywood and Swain Cos. (Great Smoky NP), NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Hickory-Morganton-Lenoir, NC  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.43   | 5.33              | 5.33   | 6.24   |
| Hillsborough County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.30   | 0.36              | 0.36   | 0.43   |
| Houston-Galveston-Brazoria, TX  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 108.08 | 130.91            | 130.91 | 153.50 |
| Houston-Galveston-Brazoria, TX  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 108.04 | 130.86            | 130.85 | 153.44 |
| Humphreys County; (part) TVA  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.98   | 1.18              | 1.18   | 1.39   |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                     | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Johnsonville, TN                                      |                             |  |   |  |        |                   |        |        |
| Huntington-Ashland, WV-KY                             | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 3.86   | 4.65              | 4.65   | 5.45   |
| Huntington-Ashland, WV-KY-OH                          | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 7.07   | 8.51              | 8.51   | 9.97   |
| Huron Co., MI   | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Imperial Co, CA                                       | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 4.00   | 4.82              | 4.82   | 5.65   |
| Imperial Co., CA                                      | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 4.85   | 5.84              | 5.84   | 6.84   |
| Imperial County, CA                                   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 4.85   | 5.84              | 5.84   | 6.84   |
| Imperial County; Imperial Valley planning area, CA    | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 4.84   | 5.83              | 5.83   | 6.83   |
| Indian Wells, CA                                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.34   | 2.21              | 2.22   | 2.78   |
| Indiana, PA   | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.77   | 2.13              | 2.13   | 2.49   |
| Indianapolis Area, IN                                 | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Indianapolis, IN                                      | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 47.76  | 57.54             | 57.53  | 67.37  |
| Indianapolis, IN                                      | PM 2.5 (1997 Annual)        | Maintenance                                  | 100                                       | 0  | 36.86  | 44.40             | 44.39  | 51.99  |
| Indianapolis, IN                                      | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 8.71   | 10.49             | 10.49  | 12.28  |
| Inyo County; Owens Valley planning area, CA           | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 0.19   | 0.22              | 0.22   | 0.26   |
| Jackson Co., IN                                       | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 1.96   | 2.36              | 2.36   | 2.77   |
| Jackson County, MO                                    | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.45   |
| Jackson County; Medford-Ashland (incl White City), OR | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 3.71   | 4.47              | 4.47   | 5.23   |
| Jamestown, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 3.69   | 4.44              | 4.44   | 5.20   |
| Jamestown, NY   | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 3.69   | 4.44              | 4.44   | 5.20   |
| Jefferson County, KY                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Jefferson County, MO                                  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.99   | 1.20              | 1.20   | 1.40   |
| Jefferson County, NY                                  | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 2.85   | 3.43              | 3.43   | 4.01   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                          | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Jefferson County; (part) Steubenville & Mingo Junction, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.22   | 1.47              | 1.47   | 1.72   |
| Jefferson County; (part), OH                               | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.08   | 0.09              | 0.09   | 0.11   |
| Johnstown, PA  | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 2.16   | 2.60              | 2.60   | 3.04   |
| Johnstown, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 2.32   | 2.80              | 2.80   | 3.28   |
| Johnstown, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 2.32   | 2.80              | 2.80   | 3.28   |
| Josephine County; Grants Pass, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.90   | 1.09              | 1.09   | 1.27   |
| Juneau; Mendenhall Valley area, AK                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.17   | 0.20              | 0.20   | 0.23   |
| Kalamazoo-Battle Creek, MI                                 | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.35  | 16.08             | 16.07  | 18.82  |
| Kansas City, KS-MO   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.35  | 42.58             | 42.58  | 49.86  |
| Kent and Queen Anne's Cos., MD                             | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 2.72   | 3.27              | 3.27   | 3.83   |
| Kern County (Eastern Kern), CA                             | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.25   | 3.31              | 3.32   | 4.07   |
| Kern County (Eastern Kern), CA                             | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.25   | 3.31              | 3.32   | 4.07   |
| Kewaunee County, WI  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.45   | 0.54              | 0.54   | 0.63   |
| King County; Kent, WA                                      | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| King County; Seattle, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Klamath County; Klamath Falls, OR                          | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.72   | 2.07              | 2.07   | 2.42   |
| Klamath Falls Area, OR                                     | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.72   | 2.07              | 2.07   | 2.42   |
| Klamath Falls, OR  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.81   | 2.18              | 2.18   | 2.56   |
| Knoxville, TN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.66  | 28.51             | 28.50  | 33.38  |
| Knoxville, TN  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 14.39  | 17.33             | 17.33  | 20.29  |
| Knoxville, TN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 18.79  | 22.64             | 22.64  | 26.51  |
| Knoxville-Sevierville-La Follette,                         | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 18.79  | 22.64             | 22.64  | 26.51  |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| TN   |                                     |  |   |  |        |                   |        |        |
| La Porte Co., IN   | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 4.18   | 5.04              | 5.04   | 5.90   |
| La Porte County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Lake County (part); Lakeview, OR   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.36   | 0.44              | 0.44   | 0.51   |
| Lake County, OH  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 5.14   | 6.19              | 6.19   | 7.25   |
| Lake County: (part), IN  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 5.53   | 6.66              | 6.66   | 7.80   |
| Lake County; (part) Eastlake, Timberlake, Lakeline, Willoughby, Mentor, OH | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.68   | 0.81              | 0.81   | 0.95   |
| Lake County; Cities of East Chicago, Hammond, Whiting, and Gary, IN        | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 2.72   | 3.28              | 3.28   | 3.84   |
| Lake County; Polson, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.04   | 0.04              | 0.04   | 0.05   |
| Lake County; Ronan, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Lake Tahoe Nevada Area, NV   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Lake Tahoe North Shore Area, CA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.15   | 0.18              | 0.18   | 0.21   |
| Lake Tahoe South Shore Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.49   |
| Lancaster, PA  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 9.85   | 11.87             | 11.86  | 13.89  |
| Lancaster, PA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 9.85   | 11.87             | 11.86  | 13.89  |
| Lancaster, PA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 9.85   | 11.87             | 11.86  | 13.89  |
| Lancaster, PA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 9.85   | 11.87             | 11.86  | 13.89  |
| Lane County (part); Oakridge, OR   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Lane County; Eugene/Springfield, OR  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 4.50   | 5.42              | 5.42   | 6.35   |
| Lansing-East Lansing, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 12.18  | 14.68             | 14.67  | 17.18  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                            | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Las Vegas Area, NV   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 29.85  | 35.95             | 35.95  | 42.10  |
| Las Vegas, NV  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.14  | 36.31             | 36.31  | 42.52  |
| LaSalle County; Oglesby, IL                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.70   | 0.84              | 0.84   | 0.98   |
| Laurel Area, MT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.02   | 0.03              | 0.03   | 0.03   |
| Lemont, IL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 2.97   | 3.65              | 3.66   | 4.30   |
| Libby, MT  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.29   | 0.34              | 0.34   | 0.40   |
| Liberty-Clairton, PA   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Liberty-Clairton, PA   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Lima, OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.00   | 3.66              | 3.66   | 4.30   |
| Lincoln County; Libby and vicinity, MT                       | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.08   | 0.10              | 0.10   | 0.12   |
| Logan, UT-ID   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.75   | 2.11              | 2.11   | 2.47   |
| Longmont Area, CO  | CO (1971 8-hr)                      | Maintenance, Moderate<br>≤ 12.7 ppm          | 100                                       | 0  | 1.48   | 1.78              | 1.78   | 2.08   |
| Lorain County (part), OH                                     | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.73   | 0.88              | 0.88   | 1.03   |
| Los Angeles, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 290.58 | 353.18            | 353.18 | 414.49 |
| Los Angeles-San Bernardino Cos. (W Mojave De                 | Ozone (1997 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 21.97  | 29.58             | 29.64  | 35.59  |
| Los Angeles-San Bernardino Counties (West Mojave Desert), CA | Ozone (2008 8-hr)                   | Nonattainment, Severe 15                     | 25  | 0  | 21.97  | 29.58             | 29.64  | 35.59  |
| Los Angeles-South Coast Air Basin Area, CA                   | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 290.86 | 353.51            | 353.51 | 414.88 |
| Los Angeles-South Coast Air Basin Area, CA                   | NO <sub>2</sub> (1971 Annual)       | Maintenance                                  | 100                                       | 0  | 290.84 | 353.49            | 353.48 | 414.85 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 290.77 | 353.41            | 353.41 | 414.76 |
| Los Angeles-South Coast Air Basin, CA                        | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 290.82 | 353.46            | 353.46 | 414.82 |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                              | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Los Angeles-South Coast Air Basin, CA                          | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 290.58 | 353.18            | 353.18 | 414.49 |
| Louisville, KY-IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 23.84  | 28.72             | 28.72  | 33.63  |
| Louisville, KY-IN  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 23.01  | 27.72             | 27.72  | 32.46  |
| Lowell Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.02   | 2.43              | 2.43   | 2.85   |
| Lucas County (part), OH  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 6.01   | 7.33              | 7.33   | 8.61   |
| Macon, GA  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.51   | 5.43              | 5.43   | 6.36   |
| Macon, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 4.51   | 5.43              | 5.43   | 6.36   |
| Madison & Page Cos. (Shenandoah NP), VA                        | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Madison County; Granite City Township and Nameoki Township, IL | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.61   | 11.61             | 11.67  | 14.71  |
| Manchester Area, NH  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.55   | 1.87              | 1.87   | 2.19   |
| Manitowoc County, WI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.28   | 2.75              | 2.75   | 3.22   |
| Maricopa and Pinal Counties; Phoenix planning area, AZ         | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 68.41  | 82.41             | 82.40  | 96.49  |
| Marion County: Lawrence, Washington, and Warrant Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 8.28   | 9.97              | 9.97   | 11.68  |
| Mariposa and Tuolumne Cos., CA: (Southern Mo                   | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.19   | 2.64              | 2.64   | 3.09   |
| Mariposa County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.85   | 1.03              | 1.03   | 1.20   |
| Marshall, WV   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.26   | 0.31              | 0.31   | 0.37   |
| Martinsburg, WV-Hagerstown, MD                                 | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 7.95   | 9.58              | 9.58   | 11.22  |
| Mason Co, MI   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.67   | 0.81              | 0.81   | 0.95   |
| Medford Area, OR   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 1.97   | 2.37              | 2.37   | 2.78   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Memphis Area, TN                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 16.84  | 20.33             | 20.33  | 23.82  |
| Memphis, TN-AR                              | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 19.44  | 23.47             | 23.46  | 27.49  |
| Memphis, TN-MS-AR                           | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 22.97  | 27.72             | 27.71  | 32.47  |
| Miami, AZ                                   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Miami, AZ                                   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Miami, AZ                                   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Milwaukee-Racine, WI                        | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 31.36  | 37.77             | 37.77  | 44.23  |
| Milwaukee-Racine, WI                        | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 22.55  | 27.17             | 27.16  | 31.81  |
| Minneapolis-St. Paul Area, MN               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 59.58  | 72.60             | 72.61  | 85.26  |
| Missoula Area, MT                           | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.72   | 2.07              | 2.07   | 2.43   |
| Missoula county; Missoula and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.64   | 1.98              | 1.98   | 2.31   |
| Modesto Area, CA                            | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 3.31   | 3.98              | 3.98   | 4.66   |
| Mohave County (part); Bullhead City, AZ     | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.94   | 2.34              | 2.34   | 2.74   |
| Mono County; Mammoth Lake planning area, CA | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.52   | 0.63              | 0.63   | 0.74   |
| Mono County; Mono Basin, CA                 | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Morenci, AZ                                 | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.13              | 0.13   | 0.15   |
| Morgan County, IN                           | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.86   |
| Morongo Band of Mission Indians             | Ozone (1997 8-hr)                   | Nonattainment, Severe 17                     | 25  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |
| Morongo Band of Mission Indians             | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 0.01   | 0.01              | 0.01   | 0.01   |



**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                               | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Morristown Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.15   |
| Muncie, IN  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.20   | 3.85              | 3.85   | 4.51   |
| Murray Co. (Chattahoochee Nat Forest), GA                       | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 0.03   | 0.04              | 0.04   | 0.04   |
| Muscatine County; (part), IA                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.21   | 0.25              | 0.25   | 0.29   |
| Muscatine, IA   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.40   | 0.49              | 0.49   | 0.57   |
| Muskegon, MI  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 3.51   | 4.23              | 4.22   | 4.95   |
| Muskingum River, OH   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Nashua Area, NH   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.51   | 1.81              | 1.81   | 2.12   |
| Nashville, TN   | Ozone (2008 8-hr)                   | Maintenance                                  | 100                                       | 0  | 35.02  | 42.19             | 42.18  | 49.39  |
| Nassau County, FL   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.07   | 0.08              | 0.08   | 0.09   |
| Nevada County (Western part), CA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 2.57   | 3.10              | 3.10   | 3.63   |
| Nevada County (Western part), CA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.56   | 3.09              | 3.09   | 3.61   |
| New Haven County, CT  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.34   | 0.41              | 0.41   | 0.48   |
| New Haven-Meriden-Waterbury Area, CT                            | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 16.27  | 19.60             | 19.60  | 22.95  |
| New Manchester-Grant magisterial district in Hancock County, WV | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.09   | 0.10              | 0.10   | 0.12   |
| New York County, NY   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 10.57  | 12.74             | 12.73  | 14.91  |
| New York, NY-NJ-CT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 299.34 | 360.61            | 360.55 | 422.23 |
| New York-N. New Jersey-Long Island Area, NY-NJ-CT               | CO (1971 8-hr)                      | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 166.67 | 200.78            | 200.75 | 235.09 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 300.52 | 362.03            | 361.98 | 423.90 |
| New York-N. New Jersey-Long Island, NY-NJ-CT                    | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 299.87 | 361.25            | 361.19 | 422.98 |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area  | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| New York-N. New Jersey-Long Island, NY-NJ-CT   | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 299.34 | 360.61            | 360.55 | 422.23 |
| NJ portion of the Northeast Pennsylvania-Upper Delaware Valley Interstate AQCR: (part), NJ | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 1.07   | 1.29              | 1.29   | 1.51   |
| Nogales, AZ  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.92   | 1.10              | 1.10   | 1.29   |
| Norfolk-Virginia Beach-Newport News (Hampton)  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 100                                       | 0  | 30.54  | 36.79             | 36.78  | 43.07  |
| Oakridge, OR   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.03   |
| Ogden Area, UT   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Ogden Area, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.02   | 1.23              | 1.23   | 1.44   |
| Olmsted County; (part), MN   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.56              | 0.56   | 0.66   |
| Olmsted; City of Rochester, MN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.90   | 2.29              | 2.29   | 2.68   |
| Parkersburg-Marietta, WV-OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 3.72   | 4.48              | 4.48   | 5.24   |
| Parkersburg-Marietta, WV-OH  | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 1.85   | 2.23              | 2.22   | 2.61   |
| Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation                       | Ozone (2008 8-hr)                   | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pekin, IL  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.77   | 0.93              | 0.93   | 1.09   |
| Penns Grove Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Peoria County: Hollis twp, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.02   | 0.02              | 0.02   | 0.02   |
| Peoria County: Peoria, IL  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.53   | 1.85              | 1.85   | 2.16   |
| Perth Amboy Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.34   | 2.81              | 2.81   | 3.30   |
| Philadelphia-Camden County Area, PA-NJ   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 17.70  | 21.43             | 21.43  | 25.12  |
| Philadelphia-Wilmington, PA-NJ-DE  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 80.23  | 96.76             | 96.74  | 113.33 |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Philadelphia-Wilmington, PA-NJ-DE                           | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 80.23  | 96.76             | 96.74  | 113.33 |
| Philadelphia-Wilmington-Atlantic Ci, PA-NJ-M                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 129.83 | 156.52            | 156.49 | 183.30 |
| Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE          | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 121.27 | 146.20            | 146.18 | 171.22 |
| Phoenix Area, AZ  | CO (1971 8-hr)                      | Maintenance, Serious                         | 100                                       | 0  | 65.35  | 78.73             | 78.72  | 92.18  |
| Phoenix-Mesa, AZ  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.68  | 82.74             | 82.72  | 96.87  |
| Phoenix-Mesa, AZ  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 68.63  | 82.67             | 82.66  | 96.80  |
| Pierce County; Tacoma, WA                                   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.03   | 0.03              | 0.03   | 0.04   |
| Pima County; Ajo planning area, AZ                          | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Pima County; Rillito planning area, AZ                      | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Pinal and Gila Counties; Payson, AZ                         | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.66   | 0.80              | 0.80   | 0.93   |
| Pinal County (part); West Pinal, AZ                         | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.86   | 9.47              | 9.47   | 11.08  |
| Pitkin County; Aspen, CO                                    | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.47   | 0.57              | 0.57   | 0.67   |
| Pittsburgh Area, PA   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 3.13   | 3.77              | 3.77   | 4.42   |
| Pittsburgh-Beaver Valley, PA                                | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 36.82  | 44.36             | 44.35  | 51.94  |
| Pittsburgh-Beaver Valley, PA                                | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 36.82  | 44.36             | 44.35  | 51.94  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 33.52  | 40.38             | 40.38  | 47.29  |
| Pittsburgh-Beaver Valley, PA                                | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 33.52  | 40.38             | 40.38  | 47.29  |
| Polk County, TN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.58   | 0.70              | 0.70   | 0.82   |
| Portland Area: Portland Metro Service District Boundary, OR | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 21.94  | 26.43             | 26.43  | 30.95  |
| Portland, ME  | Ozone (1997 8-hr)                   | Maintenance, Marginal                        | 50  | 0  | 13.73  | 16.55             | 16.54  | 19.37  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                        | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|--|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|  |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Poughkeepsie, NY   | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 18.37  | 22.14             | 22.13  | 25.92  |
| Power-Bannock Counties; Fort Hall Indian Reservation, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Power-Bannock Counties; Portneuf Valley Area, ID         | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 1.81   | 2.18              | 2.18   | 2.55   |
| Providence (all of RI), RI                               | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 17.95  | 21.63             | 21.62  | 25.32  |
| Provo Area, UT   | CO (1971 8-hr)              | Maintenance, Moderate > 12.7 ppm             | 100                                       | 0  | 1.29   | 1.56              | 1.56   | 1.82   |
| Provo, UT  | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 7.45   | 8.98              | 8.98   | 10.51  |
| Prowers County; Lamar, CO                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Raleigh-Durham Area, NC                                  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 25.90  | 31.20             | 31.20  | 36.54  |
| Raleigh-Durham-Chapel Hill, NC                           | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 43.83  | 52.80             | 52.79  | 61.82  |
| Ramsey County; (part), MN                                | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.07   |
| Reading, PA  | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 8.18   | 9.86              | 9.86   | 11.54  |
| Reading, PA  | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 50  | 0  | 8.18   | 9.86              | 9.86   | 11.54  |
| Reading, PA  | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 8.18   | 9.86              | 9.86   | 11.54  |
| Reno Area, NV  | CO (1971 8-hr)              | Maintenance, Moderate ≤ 12.7 ppm             | 100                                       | 0  | 5.94   | 7.16              | 7.16   | 8.38   |
| Rhineland, WI  | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.92   | 1.11              | 1.11   | 1.30   |
| Richmond-Petersburg, VA                                  | Ozone (1997 8-hr)           | Maintenance, Marginal                        | 100                                       | 0  | 26.34  | 31.73             | 31.73  | 37.16  |
| Riverside Co. (Coachella Valley), CA                     | Ozone (1997 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 8.03   | 9.67              | 9.67   | 11.32  |
| Riverside County (Coachella Valley), CA                  | Ozone (2008 8-hr)           | Nonattainment, Severe 15                     | 25  | 0  | 8.03   | 9.67              | 9.67   | 11.32  |
| Riverside County; Coachella Valley planning area, CA     | PM 10 (1987 24-hr)          | Nonattainment, Serious                       | 70  | 0  | 9.37   | 11.29             | 11.29  | 13.22  |
| Riverside, Los Angeles, Orange,                          | PM 10 (1987 24-hr)          | Maintenance, Serious                         | 100                                       | 0  | 289.44 | 351.81            | 351.81 | 412.88 |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| and San Bernardino Counties;<br>South Coast Air Basin, CA   |                                     |  |   |  |        |                   |        |        |
| Rochester, NY   | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 24.01  | 28.93             | 28.93  | 33.87  |
| Rocky Mount, NC   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 5.74   | 6.91              | 6.91   | 8.09   |
| Rome, GA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 1.91   | 2.30              | 2.30   | 2.69   |
| Rosebud County; Lame Deer, MT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.60   | 0.72              | 0.72   | 0.85   |
| Routt County (part); Steamboat Springs, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.56   | 0.68              | 0.68   | 0.79   |
| Sacramento Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 23.98  | 28.90             | 28.89  | 33.83  |
| Sacramento County, CA   | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 23.16  | 27.91             | 27.90  | 32.67  |
| Sacramento Metro, CA  | Ozone (1997 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 44.54  | 53.66             | 53.65  | 62.84  |
| Sacramento Metro, CA  | Ozone (2008 8-hr)                   | Nonattainment, Severe<br>15                  | 25  | 0  | 44.54  | 53.67             | 53.66  | 62.84  |
| Sacramento, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 43.99  | 53.01             | 53.00  | 62.07  |
| Salem Area, OR  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 4.82   | 5.80              | 5.80   | 6.80   |
| Salt Lake City Area, UT   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 2.66   | 3.20              | 3.20   | 3.75   |
| Salt Lake City, UT  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 29.74  | 35.83             | 35.82  | 41.95  |
| Salt Lake County, UT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 17.53  | 21.12             | 21.12  | 24.73  |
| Salt Lake County, UT  | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 17.53  | 21.12             | 21.12  | 24.73  |
| San Bernardino County (part);<br>excluding Searles Valley Planning<br>area and South Coast Air Basin,<br>CA | PM 10 (1987 24-hr)                  | Nonattainment,<br>Moderate                   | 100                                       | 0  | 9.93   | 11.97             | 11.97  | 14.02  |
| San Diego Area, CA  | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 62.75  | 75.60             | 75.58  | 88.51  |
| San Diego County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 62.84  | 75.70             | 75.69  | 88.64  |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| San Diego, CA   | Ozone (1997 8-hr)                   | Maintenance, Moderate                        | 100                                       | 0  | 62.82  | 75.68             | 75.66  | 88.61  |
| San Francisco Bay Area, CA  | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 123.12 | 148.40            | 148.38 | 173.79 |
| San Francisco Bay Area, CA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 122.47 | 147.63            | 147.60 | 172.88 |
| San Francisco Bay Area, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 123.12 | 148.40            | 148.38 | 173.79 |
| San Francisco-Oakland-San Jose Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate<br><= 12.7 ppm         | 100                                       | 0  | 112.47 | 135.57            | 135.55 | 158.76 |
| San Joaquin Valley Air Basin; Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare Counties, CA | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 83.77  | 101.52            | 101.51 | 119.05 |
| San Joaquin Valley, CA  | Ozone (1997 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 83.77  | 101.52            | 101.51 | 119.05 |
| San Joaquin Valley, CA  | Ozone (2008 8-hr)                   | Nonattainment, Extreme                       | 10  | 0  | 83.77  | 101.52            | 101.51 | 119.05 |
| San Joaquin Valley, CA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 83.75  | 101.50            | 101.50 | 119.04 |
| San Joaquin Valley, CA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 83.75  | 101.50            | 101.50 | 119.04 |
| San Luis Obispo (Eastern San Luis Obispo), CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.05   | 0.06              | 0.06   | 0.08   |
| San Manuel, AZ  | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.11   | 0.14              | 0.14   | 0.16   |
| San Miguel County; Telluride, CO  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.18   | 0.22              | 0.22   | 0.26   |
| Sanders County (part); Thompson Falls and vicinity, MT  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Santa Cruz County; Nogales planning area, AZ  | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.92   | 1.10              | 1.10   | 1.29   |
| Scranton-Wilkes-Barre, PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 17.16  | 20.67             | 20.67  | 24.21  |
| Seaford, DE   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 4.78   | 5.75              | 5.75   | 6.74   |
| Seattle-Tacoma Area, WA   | CO (1971 8-hr)                      | Maintenance, Moderate<br>> 12.7 ppm          | 100                                       | 0  | 51.44  | 61.96             | 61.95  | 72.55  |
| Seattle-Tacoma, WA  | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 8.17   | 9.84              | 9.84   | 11.52  |
| Sheboygan County, WI  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 2.36   | 2.84              | 2.84   | 3.33   |
| Sheboygan, WI   | Ozone (1997 8-hr)                   | Nonattainment,                               | 100                                       | 0  | 2.36   | 2.84              | 2.84   | 3.33   |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area               | NAAQS Pollutant (Standard)  | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-----------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                             |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
|   |                             | Moderate                                     |   |  |        |                   |        |        |
| Sheridan County; City of Sheridan, WY           | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.50   | 0.60              | 0.60   | 0.70   |
| Shoshone County (part); excluding Pinehurst, ID | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.81   | 0.97              | 0.97   | 1.14   |
| Shoshone County; City of Pinehurst, ID          | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Silver Bow County; Butte, MT                    | PM 10 (1987 24-hr)          | Nonattainment, Moderate                      | 100                                       | 0  | 0.80   | 0.96              | 0.96   | 1.12   |
| Somerville Area, NJ                             | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| South Bend-Elkhart, IN                          | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 9.29   | 11.19             | 11.19  | 13.10  |
| Southwest Indiana, IN                           | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.23   | 0.28              | 0.28   | 0.33   |
| Spokane Area, WA                                | CO (1971 8-hr)              | Maintenance, Serious                         | 100                                       | 0  | 5.29   | 6.38              | 6.38   | 7.47   |
| Spokane County; (part), WA                      | PM 10 (1987 24-hr)          | Maintenance, Moderate                        | 100                                       | 0  | 5.46   | 6.58              | 6.58   | 7.70   |
| Springfield (W. Mass), MA                       | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 50  | 0  | 19.85  | 23.92             | 23.91  | 28.00  |
| Springfield Area, MA                            | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 3.24   | 3.90              | 3.90   | 4.57   |
| St. Bernard Parish, LA                          | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 0.64   | 0.96              | 0.96   | 1.18   |
| St. Louis Area, MO                              | CO (1971 8-hr)              | Maintenance                                  | 100                                       | 0  | 15.90  | 19.16             | 19.15  | 22.43  |
| St. Louis, MO-IL                                | Ozone (1997 8-hr)           | Nonattainment, Moderate                      | 100                                       | 0  | 59.76  | 75.64             | 75.69  | 89.68  |
| St. Louis, MO-IL                                | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 59.34  | 75.13             | 75.18  | 89.08  |
| St. Louis-St. Charles-Farmington, MO-IL         | Ozone (2008 8-hr)           | Nonattainment, Marginal                      | 100                                       | 0  | 59.34  | 75.13             | 75.18  | 89.08  |
| State College, PA                               | Ozone (1997 8-hr)           | Maintenance                                  | 50  | 0  | 4.00   | 4.82              | 4.82   | 5.65   |
| Steubenville, OH-WV                             | SO <sub>2</sub> (2010 1-hr) | Nonattainment                                | 100                                       | 0  | 1.30   | 1.56              | 1.56   | 1.83   |
| Steubenville-Weirton, OH-WV                     | Ozone (1997 8-hr)           | Maintenance                                  | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.20   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (1997 Annual)        | Nonattainment                                | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.20   |
| Steubenville-Weirton, OH-WV                     | PM 2.5 (2006 24-hr)         | Nonattainment                                | 100                                       | 0  | 2.27   | 2.74              | 2.74   | 3.20   |

**Appendix A Air Quality Non-Attainment Area Results**

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                           | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Stockton Area, CA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.57   | 7.91              | 7.91   | 9.26   |
| Sullivan County, TN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.29   | 0.35              | 0.35   | 0.41   |
| Sutter County (Sutter Buttes), CA                           | Ozone (1997 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Syracuse Area; Onondaga County, NY                          | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 10.17  | 12.25             | 12.25  | 14.34  |
| Tazewell County: Groveland twp, IL                          | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.41   | 0.50              | 0.50   | 0.58   |
| Terre Haute, IN   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 2.52   | 3.04              | 3.04   | 3.56   |
| Terre Haute, IN   | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.63   | 0.75              | 0.75   | 0.88   |
| Thurston County; Cities of Olympia, Tumwater, and Lacey, WA | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 1.83   | 2.20              | 2.20   | 2.58   |
| Tioga Co., PA   | Ozone (1997 8-hr)                   | Maintenance                                  | 50  | 0  | 1.34   | 1.62              | 1.62   | 1.90   |
| Toledo, OH  | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 13.67  | 16.57             | 16.57  | 19.43  |
| Toms River Area, NJ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Tooele County (part), UT                                    | SO <sub>2</sub> (1971 24-hr/Annual) | Nonattainment                                | 100                                       | 0  | 0.10   | 0.12              | 0.12   | 0.14   |
| Trenton Area, NJ  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.68   | 2.02              | 2.02   | 2.37   |
| Trona, CA   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 0.01   | 0.02              | 0.02   | 0.02   |
| Tucson Area, AZ   | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 15.87  | 19.12             | 19.12  | 22.39  |
| Tuscan Buttes, CA   | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Union County; LaGrande, OR                                  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.76   | 0.92              | 0.92   | 1.08   |
| Upper Green River Basin Area, WY                            | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 100                                       | 0  | 0.61   | 0.74              | 0.74   | 0.86   |
| Utah County, UT   | PM 10 (1987 24-hr)                  | Nonattainment, Moderate                      | 100                                       | 0  | 7.45   | 8.98              | 8.98   | 10.51  |



**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts  
Formaldehyde 2050**

| Nonattainment or Maintenance Area                                     | NAAQS Pollutant (Standard)          | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|---|-------------------------------------|--|---|--|--------|-------------------|--------|--------|
|   |                                     |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Vancouver Area: Clark County (part), WA                               | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 5.03   | 6.07              | 6.06   | 7.10   |
| Ventura County, CA  | Ozone (1997 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 18.64  | 25.57             | 25.62  | 30.89  |
| Ventura County, CA  | Ozone (2008 8-hr)                   | Nonattainment, Serious                       | 50  | 0  | 13.76  | 16.57             | 16.57  | 19.41  |
| Vermillion County; Part of Clinton Township, IN                       | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 0.00   | 0.00              | 0.00   | 0.00   |
| Vigo County, IN   | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 2.52   | 3.04              | 3.04   | 3.56   |
| Walla Walla County; Wallula, WA                                       | PM 10 (1987 24-hr)                  | Maintenance, Serious                         | 100                                       | 0  | 0.07   | 0.09              | 0.09   | 0.10   |
| Waltham Area, MA  | CO (1971 8-hr)                      | Maintenance                                  | 100                                       | 0  | 1.03   | 1.24              | 1.24   | 1.45   |
| Warren County: Conewago Twp, PA                                       | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.06   | 0.08              | 0.08   | 0.09   |
| Warren County: Warren Boro, Pleasant Twp, Glade Twp, PA               | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 0.32   | 0.38              | 0.38   | 0.44   |
| Warren, PA  | SO <sub>2</sub> (2010 1-hr)         | Nonattainment                                | 100                                       | 0  | 0.38   | 0.46              | 0.46   | 0.54   |
| Washington Area, DC-MD-VA   | CO (1971 8-hr)                      | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 12.31  | 14.83             | 14.83  | 17.37  |
| Washington, DC-MD-VA  | Ozone (1997 8-hr)                   | Nonattainment, Moderate                      | 50  | 0  | 90.81  | 109.40            | 109.39 | 128.10 |
| Washington, DC-MD-VA  | Ozone (2008 8-hr)                   | Nonattainment, Marginal                      | 50  | 0  | 90.65  | 109.20            | 109.18 | 127.86 |
| Washington, DC-MD-VA  | PM 2.5 (1997 Annual)                | Nonattainment                                | 100                                       | 0  | 89.24  | 107.51            | 107.49 | 125.88 |
| Washoe County; Reno planning area, NV                                 | PM 10 (1987 24-hr)                  | Nonattainment, Serious                       | 70  | 0  | 5.88   | 7.08              | 7.08   | 8.29   |
| Wayne County: Boston, Center, Franklin, Wayne & Webster Townships, IN | SO <sub>2</sub> (1971 24-hr/Annual) | Maintenance                                  | 100                                       | 0  | 1.87   | 2.26              | 2.25   | 2.64   |
| Wayne County; (part), MI  | PM 10 (1987 24-hr)                  | Maintenance, Moderate                        | 100                                       | 0  | 6.06   | 9.82              | 9.86   | 12.26  |
| West Central Pinal County, AZ   | PM 2.5 (2006 24-hr)                 | Nonattainment                                | 100                                       | 0  | 1.65   | 1.99              | 1.99   | 2.33   |
| Wheeling, WV-OH   | Ozone (1997 8-hr)                   | Maintenance                                  | 100                                       | 0  | 4.38   | 5.28              | 5.28   | 6.19   |
| Wheeling, WV-OH   | PM 2.5 (1997 Annual)                | Maintenance                                  | 100                                       | 0  | 4.38   | 5.28              | 5.28   | 6.19   |

**Table A-88. Changes in Emissions from U.S. HD Vehicles, by Nonattainment or Maintenance Area and Alternative—Cumulative Impacts Formaldehyde 2050**

| Nonattainment or Maintenance Area   | NAAQS Pollutant (Standard) | Status, Severity Classification <sup>b</sup> | General Conformity Threshold <sup>c</sup> | Emission Changes for Proposed Alternative (tons per year) <sup>a</sup> |        |                   |        |        |
|-------------------------------------|----------------------------|--|---|--|--------|-------------------|--------|--------|
|                                     |                            |  |   | Alt.1 – No Action  | Alt. 2 | Alt.3 – Preferred | Alt. 4 | Alt. 5 |
| Winston-Salem Area, NC              | CO (1971 8-hr)             | Maintenance, Moderate <= 12.7 ppm            | 100                                       | 0  | 6.90   | 8.31              | 8.31   | 9.73   |
| Worcester Area, MA                  | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 4.53   | 5.46              | 5.45   | 6.39   |
| Yakima Area, WA                     | CO (1971 8-hr)             | Maintenance                                  | 100                                       | 0  | 0.82   | 0.99              | 0.99   | 1.16   |
| Yakima County; (part), WA           | PM 10 (1987 24-hr)         | Maintenance, Moderate                        | 100                                       | 0  | 2.15   | 2.59              | 2.59   | 3.04   |
| York, PA                            | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 8.96   | 10.79             | 10.79  | 12.64  |
| York, PA                            | PM 2.5 (1997 Annual)       | Nonattainment                                | 100                                       | 0  | 6.90   | 8.31              | 8.31   | 9.74   |
| Youngstown-Warren-Sharon, PA-OH     | Ozone (1997 8-hr)          | Maintenance                                  | 50  | 0  | 17.18  | 20.70             | 20.70  | 24.24  |
| Yuba City-Marysville, CA            | PM 2.5 (2006 24-hr)        | Nonattainment                                | 100                                       | 0  | 3.57   | 4.31              | 4.30   | 5.04   |
| Yuma County; Yuma planning area, AZ | PM 10 (1987 24-hr)         | Nonattainment, Moderate                      | 100                                       | 0  | 3.03   | 3.65              | 3.65   | 4.27   |

a. Reductions are shown as positive values. Negative values are emission increases. Values of less than 0.005 tons per year are rounded to zero.

b. Nonattainment or maintenance status as of 12/05/2013. Source: U.S. EPA, The Green Book Nonattainment Areas for Criteria Pollutants; <http://www.epa.gov/airquality/greenbook/>. "--" indicates that no severity classification has been established for the NAAQS pollutant.

c. Emissions thresholds in tons per year. Where the threshold differs by precursor pollutant, the smallest of the precursor thresholds is shown. These thresholds are provided for information only; a general conformity determination is not required for the Proposed Action. Source: 40 CFR 93.853.